

Media Release

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Voith showcases the newest developments for the commercial vehicles industry at IAA 2018

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- **Voith reveals the new electrical drive system for buses. Visitors can test drive the demonstrator bus as part of the e-parkour**
- **A model of the new DIWA NXT, that offers a mild-hybrid option and an additional overdrive, will be presented at the booth**
- **Voith displays its wide portfolio of components, that make operation and service more beneficial and efficient for customers**
- **Predictive monitoring and digital applications increase vehicle availability and ensure economical operation**

#DriveNewWays

Hanover, Germany. Voith will present innovative and efficient products for the commercial vehicles industry at IAA 2018, the worldwide leading trade show for commercial vehicles in Hanover, Germany. Among others Voith reveals its new electrical drive system and the new DIWA NXT transmission for buses. Additionally, Voith showcases highly efficient products for trucks, including the LP 560 air compressor and the ECO-SWR that uses water for braking. All related products and services are presented as part of the overall theme “Drive New Ways” at booth A14 in hall 17.

Innovative electrical drive system for more economical bus operation

With the development of a unique and fully electrical system Voith enters the growing market for e-mobility. The electrical drive system is a well-balanced system that impresses with low weight and maximized efficiency, rounded off with an intelligent energy management system. The first prototype was installed in a Solaris Urbino electric, but the Voith system can be easily integrated into vehicles from other manufacturers without restrictions. Further, it offers outstanding driving performance with a torque of 2,250 Newton meters and an output of 260 Kilowatts. The system will be displayed at the “IAA Test-Drives with Electrically Powered Commercial Vehicles”.

Advanced transmission technology for efficient bus operation

Voith stays on track with the development of its new DIWA NXT transmission that remains the number one choice for city buses. The DIWA NXT features an optional mild-hybrid system with a 48V central recuperation unit (CRU). In addition, the new transmission perfectly meets the needs of the inter-city and coach segment by providing an additional overdrive gear. First vehicle measurements confirm passenger comfort and the outstanding efficiency. A first sample of the new DIWA NXT transmission will be displayed at the Voith booth.

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Already today, the successful DIWA.6 automatic transmission from Voith offers an additional Stop-Start functionality so that bus operators can increase the profitability of their vehicles while also providing added value for the environment. More than 1,500 buses have been fitted with DIWA.6 Stop-Start technology, providing daily proof of its reliability and usefulness. Depending on the duty cycle, this enables fuel savings of up to 12 percent.

Higher efficiency and lower operating costs

The Voith ECO-SWR (secondary water retarder) is disconnectable during idling and uses water to brake. It is designed for buses as well as trucks and uses the engine coolant as its operating medium. In this way, the ECO-SWR handles up to 90 percent of all vehicle braking wear-free.

The Voith Retarder 115 CT is the latest Voith off-line oil retarder reflecting more than 40 years of engineering experience. It allows wear-free continuous braking in trucks with the optimum braking effect at low and high speed. The VR 115 CT features an integrated step-up gear and an autarkic oil supply system, leading to maximum safety in any driving situation.

The Turbo Retarder Clutch VIAB is a complete start-up and braking system. It uses a fill-regulated, hydrodynamic fluid coupling as the main component. Based on its principle the system is completely wear-free and is ready for loads up to 250 metric tons. Visitors at IAA will have the chance to test-drive trucks equipped with VIAB at the test track.

The LP 560 air compressor has been further optimized regarding light weight design and operating efficiency, still relying on the trusted two-stage principle. The air compressor can be either equipped with "TwinSave" technology, an innovative idling system to further reduce power consumption or with clutch technology to be able to fully disengage the

compressor for even higher efficiency in offload mode. Both systems are designed to save energy in the best way. With its new asymmetric design and the new side cooler the internal temperature can be reduced significantly and oil carry over is on lowest level.

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Unique service solutions for buses

SmartMaintenance enables a more efficient operation for bus operators as well as optimized vehicle maintenance. It regularly monitors the condition of the automatic transmission, reducing unplanned service-related downtimes, increasing vehicle availability, and enabling improved and foresighted maintenance planning. Hereunto the vehicle data is transmitted to Voith servers where it is evaluated with state-of-the-art technology. Based on SmartMaintenance, Voith also offers cost-effective, tailored service contracts with individual warranties, uptime guarantees, and short reaction times. This results in maximum fleet availability and optimized workshop planning.

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Energy efficiency, less emissions as well as enhanced safety

The OnEfficiency solutions by Voith increase fuel efficiency on the one hand by technical enablement based on advanced configuration of the transmission and on the other hand by people enablement based on motivating the driver to improve his driving behavior and to provide real time information about driving style.

The new OnEfficiency.SmartAccelerate is a software configuration update for the DIWA transmission which increases the embedded intelligence in city buses, offering operational optimization without the need for any specific training for drivers. The system aims to significantly and sustainably reduce fuel consumption of buses. Furthermore, it combines the signals acquired from existing sensors in Voith's automatic transmission system with information from the CAN network to interact with the driver's commands and the vehicle's dynamic behavior. This mobility software solution takes current technologies to the next level in terms of CO2 emission cutbacks without the need for significantly more expensive and complex solutions.

OnEfficiency.DriverAssist aims to motivate the driver to improve driving behavior, while enabling fleet managers to run a more efficient operation. Utilizing Voith's domain knowledge in drive technology and local public transport, this solution provides the driver with real time information about driving style. Furthermore, it helps to keep the driver engaged and

motivated, and thus reduces fuel consumption in the short and long term. Unlike existing advisory systems OnEfficiency.DriverAssist is a comprehensive platform that provides transparent and easily implementable insights about how to increase fuel efficiency.

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More information about Voith's activities at the IAA Commercial Vehicle 2018 trade show can be found online: www.voith.com/drivenewways

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About the company

Voith Turbo, a Group Division of Voith, is a specialist for intelligent drive solutions, systems and comprehensive services. Customers from highly diverse industries such as oil and gas, energy, rail and commercial vehicles, ship technology, mining and mechanical engineering rely on the advanced technologies and solutions-driven expertise of Voith Turbo.

Voith is a global technology group. With its broad portfolio of systems, products, services and digital applications, Voith sets standards in the markets of energy, oil & gas, paper, raw materials and transport & automotive. Founded in 1867, Voith today has more than 19,000 employees, sales of € 4.2 billion and locations in over 60 countries worldwide and is thus one of the largest family-owned companies in Europe.



Caption 1: Voith's innovative electrical drive system is suitable for buses from all manufacturers.



Caption 2: The new DIWA NXT features an optional mild-hybrid system with a 48V central recuperation unit (CRU).



Caption 3: The Voith Retarder 115 CT allows wear-free continuous braking in trucks with the optimum braking effect at low and high speed.



Caption 4: The LP 560 compressor with asymmetric design ensures energy saving of up to 25 percent.

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