All options covered

With its extensive experience and expertise in drive systems, Voith is playing a leading role in defining solutions for the world of transport.

A digital future for all

Fully networked via the Voith Cloud, these drive systems will offer additional digital functionality to help operators optimize public transport. Supported by Voith domain knowledge and connected to standard public transport telematics systems, the next generation of drivelines will contribute to the data and insight required for operators to achieve excellence and efficiency in fleet management, operation, service and maintenance.

System monitoring and truly predictive maintenance.

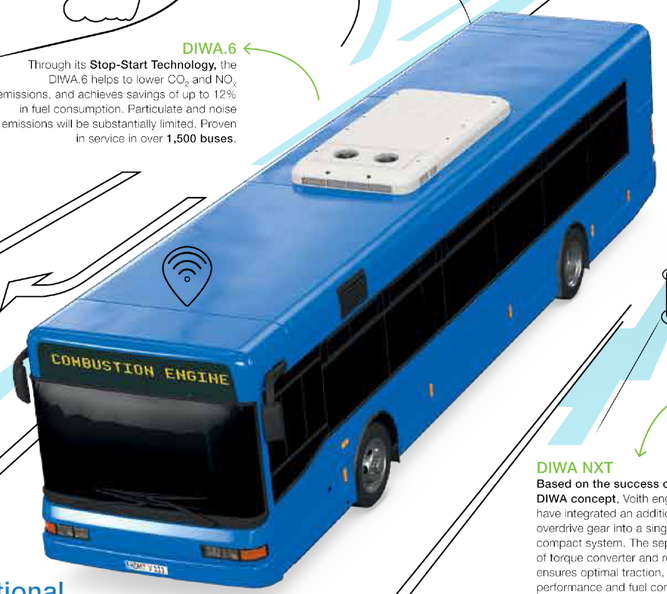
Optimum layout of routes thanks to power and energy prediction.

Tailor-made monitoring assistance systems.

Demand-driven energy management.

DIWA.6

Through its **Stop-Start Technology**, the DIWA.6 helps to lower CO_2 and NO_x emissions, and achieves savings of up to 12% in fuel consumption. Particulate and noise emissions will be substantially limited. Proven in service in over **1,500 buses**.

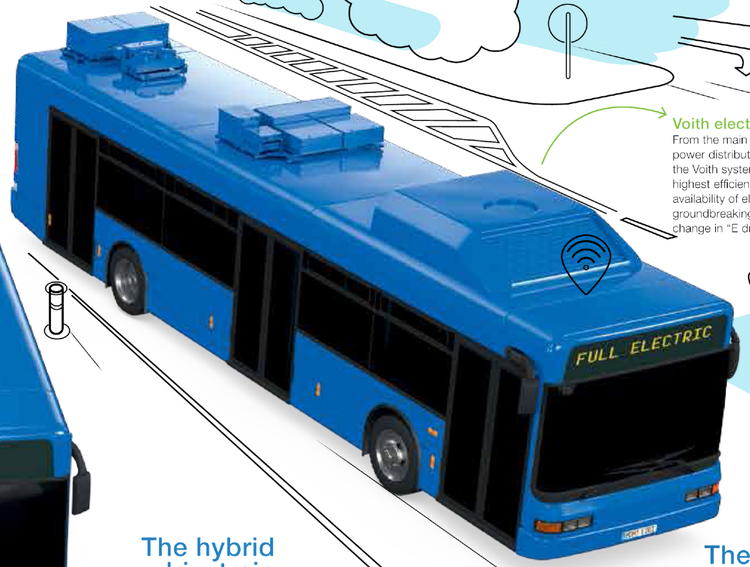


The conventional drivetrain

Today, there are more than **160,000 buses** operating with DIWA transmissions throughout the world, and over **320,000 transmissions** in total have been sold. For combustion engines, whether powered by diesel or by compressed natural gas, the DIWA automatic transmission offers tailored solutions for all kinds of city and intercity applications.

DIWA NXT

Based on the success of the DIWA concept, Voith engineers have integrated an additional overdrive gear into a single compact system. The separation of torque converter and retarder ensures optimal traction, retarder performance and fuel consumption. The wider transmission spread offers flexibility in driveline design – also for intercity buses and coaches.



Voith electric drive system

From the main drivetrain to auxiliary handling, power distribution and energy management – the Voith system covers them all. This ensures highest efficiency, range of operation and availability of electric buses. Discover how this groundbreaking technology is already driving change in "E drive" (pages 29-30).

The hybrid drivetrain

In areas where a pure electric solution is not feasible, **a mild-hybrid drivetrain** will offer an optimal alternative. In the future, the DIWA NXT automatic transmission will offer the option of an **integrated central recuperation unit** (CRU). For easy maintenance, this mild-hybrid system is based on 48 V technology, with a continuous power of 25 kW and a peak power of 35 kW. The highly efficient electric motor will support the combustion engine during demanding routes and supply power to other components, such as the air conditioning, via the vehicle's electric system, and requires almost no additional installation space due to its compact design.

The pure electric drivetrain

To reduce air and noise emissions in urban areas, operators have started to electrify their fleets. Voith is committed to providing a tailored **plug-and-play solution,** with optimized interfaces, that is easy to integrate. The Voith electric drive system is a fully electric powertrain suitable even for articulated buses and challenging topographies. Best in class for efficiency and reliability. The advanced design of the motor ensures highest efficiency. Due to the high power density, the Voith electric drive system motor has a very compact design.

www.voith.com/ontrack2-E-Bus

Fuel savings:

DIWA.6

– 7%
DIWA NXT

– 16%
DIWA NXT (–7%) + CRU (–9%)