



ZF's AxTrax AVE Electric Drive Receives the EBUS 2019 Environmental Protection Award

- **ZF receives award for its innovations for electric buses in urban public transport**
- **AxTrax AVE electric portal axle stands out due to its powerful, compact design and its flexible energy source configuration options**
- **It is also ideal as a conversion or retrofit option for buses already in operation**

Friedrichshafen / Berlin. ZF added another feather to its cap at this year's Elekbu conference, an electric bus conference for transport authorities, technology companies and science. Its AxTrax AVE electric portal axle was honored with the 2019 EBUS Award in the category "Drives for Battery Buses." The award is sponsored by the *Forum für Verkehr und Logistik e.V.*, an association that promotes electromobility of buses in public transport.

"For ZF, it is both a mandate as well as a core competency to electrify road transport across the board and, in doing so, offer the appropriate solution for every application. This award confirms that we are on the right path," commented Dr. Andreas Grossl, head of the Axle & Transmission Systems for Buses & Coaches Business Unit, upon receiving the award at the award ceremony held on February 4 in Berlin. To achieve current and future climate goals and to eliminate particulates, CO₂ and noise in cities, public transport systems have to be rethought. ZF's AxTrax AVE electric portal axle makes it easier for bus manufacturers and public transport authorities to switch over to quiet, zero local emission drives. This driven axle can be operated all electric not only by battery or overhead lines, but also in hybrid or fuel cell configurations. The flexible configuration options and the ability to select an energy source make it the ideal solution for almost any urban environment.

For even greater sustainability, ZF has partnered with the Munich-based development specialist in-tech. This company offers a retrofit service



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called e-troFit which upgrades low-floor diesel buses already in operation to a zero local emission type of drive.

Successful deployment worldwide

Unveiled in 2012, the AxTrax AVE has successfully proven itself in operation worldwide. In fact, ZF recently received volume-production orders for it from Moscow, London and major U.S. cities. In addition to its impressive drive performance – totaling 250 kW up to a maximum axle load of 13,000 kilograms – the compact design was also appealing. Since neither a conventional unit nor a universally jointed shaft are necessary for transmitting power, manufacturers now have more freedom to design the passenger area the way they want. They can add seating and standing room, for example, or provide for stepless entry and exit and even completely level aisles.

System performance

In addition to the AxTrax AVE, ZF can also deliver the necessary hardware and software to optimally align performance, efficiency and the service life of the drive. This system solution reduces test and approval costs for the manufacturer.

Captions:

- 1) A win for the AxTrax AVE electric portal axle: Dr. Andreas Grossl (5th from left), head of the Axle & Transmission Systems for Buses and Coaches Business Unit, accepts the award in the “Drives for Battery Buses” category on February 4 in Berlin.
- 2) Flexibility thanks to open technology: the AxTrax AVE can be operated not only using lithium-ion batteries, but also a fuel cell or as a hybrid.

Images: ZF



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ZF is a global leader in driveline and chassis technology as well as active and passive safety technology. The company has a global workforce of 146,000 with approximately 230 locations in some 40 countries. In 2017, ZF achieved sales of €36.4 billion and as such, is one of the largest automotive suppliers worldwide.

ZF enables vehicles to see, think and act. The company invests more than six percent of its sales in research and development annually – in particular for the development of efficient and electric drivelines and also in striving for a world without accidents. With its broad portfolio, ZF is advancing mobility and services for passenger cars, commercial vehicles and industrial technology applications.

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