



**PRESSE INFORMATION  
PRESS RELEASE**

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## **ZF Supplies Commercial Vehicle Manufacturers with Electric Drive Solutions to Speed up the Transition to Electromobility**

- **System solutions from ZF simplify the transition to electric-powered city buses**
- **AxTrax AVE electric portal axle and CeTrax electric central drive are compatible with all city bus models**
- **TraXon Hybrid covers truck applications and helps the environment**

**Friedrichshafen/Berlin. To make the transition to local zero-emission city buses and low-emission logistic transport trucks as easy and flexible as possible, ZF is providing commercial vehicle manufacturers with technology and systems expertise. The company also highlights this point at the InnoTrans trade show this year where, along with its proven AxTrax AVE electric portal axle, it also introduces technologies for the bus sector for the first time. Not only that, in addition to its new CeTrax electric central drive for city buses, ZF is offering the AxTrax AVE as a complete system solution, including all required components from one provider. This means manufacturers can choose conventional low-floor and high-floor platforms for electrically powered models, which makes the electrification of vehicle fleets more economical and convenient. In long-haul transport logistics, electric drives are no longer limited to being a fanciful idea; in fact, the hybrid version of ZF's TraXon truck transmission exhausts previously unused power savings potential at maximum output.**

Stricter emissions limits and the public debate on fine dust pollution are putting pressure not just on the passenger car manufacturers, but also on public transport operators, which are obligated to reduce emissions to help conserve the environment. This means bus manufacturers are investing resources on system integration and even more on development.



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As a leading global technology company, ZF provides OEMs with expertise during this transition. The company also demonstrates its expertise at the InnoTrans trade show for the first time where it exhibits its proven AxTrax AVE electric portal axle as a prime example of its broad portfolio in the bus technology sector. ZF offers this axle as a fully integrated package that includes advanced inverters, drive control and full power electronics as well as compatible software. The company thus guarantees optimal energy efficiency – and also a longer range.

In principle, the installation space required for the AxTrax AVE is about the same as that of a conventional portal axle. For manufacturers, this means major cost savings because they do not have to develop their own platforms for electromobility solutions. The AxTrax AVE can be combined with almost any conventional power source, including batteries, supercaps, fuel cells or even overhead lines. It is also very suitable for serial hybrid and plug-in versions. This gives OEMs and public transport operators maximum flexibility when selecting the power supply. The flat design of the electrical low-floor axle additionally supports new concepts for vehicle interior design. Thanks to standardized high-volume components, its maintenance-friendliness rounds off the overall package for the future of the city bus, which ZF has created with its AxTrax AVE.

**“Plug-and-Drive” with CeTrax**

Moreover, ZF is offering the new electric CeTrax central drive as a system solution for low-floor and high-floor buses. Thanks to its plug-and-drive approach, the CeTrax drive can be integrated into existing vehicle platforms without having to make major changes to the chassis, axles, statics or differential. ZF is therefore turning to manufacturers that plan to switch from existing conventional models to electrically powered models as part of their platform strategy. CeTrax is configured with a maximum output of up to 300 kW and a maximum torque of 4,400 Newton meters. It is intended above all for challenging bus applications and offers considerable weight advantages as well as outstanding efficiency. Since the delivery scope of the system package



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also covers drive control and inverters, manufacturers get an optimally fine-tuned total solution when it comes to performance, efficiency and service life. Furthermore, OEMs can also save time and money because ZF also handles the homologation and testing of the drive system.

**TraXon Hybrid: Parallel hybrid for long-haul transport logistics**

The TraXon Hybrid, equipped with an electric motor positioned between the combustion engine and the transmission, allows hybrid functions in heavy commercial vehicles. One feature particularly attractive for many applications is that in generator mode, the hybrid module can also supply power to other units, such as during refrigerated transports. In addition to being installed in trucks, the TraXon Hybrid is also ideal for coaches, where the hybrid drive can offer the same advantages. Even with this innovative product, ZF offers its system solution with all the mentioned benefits.

Captions:

- 1) Proven system expertise: ZF's AxTrax AVE electric portal axle as a fully integrated system package with inverter, drive control and complete power electronics, including compatible software.
- 2) "Plug-and-Drive": The electric central drive CeTrax can be integrated into existing vehicle platforms.
- 3) Heavy commercial vehicles like trucks and coaches can easily be equipped with the TraXon Hybrid and feature all hybrid functions.

Images: ZF

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**ZF Friedrichshafen AG**

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. ZF is one of the largest automotive suppliers worldwide.

ZF allows 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 in the automobile, truck and industrial technology sectors.

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