



ZF Expands Electric Drive Product Portfolio for Commercial Vehicles

- **CeTrax lite: electric central drive for vans and light commercial vehicles up to 7.5 tons**
- **CeTrax mid: electric central drive for medium-duty commercial vehicles up to 19 tons**
- **Fully integrated systems ensure flexible installation thanks to the plug and drive principle**

Friedrichshafen. ZF complements its portfolio of electrification solutions for commercial vehicles with two new electric central drives. CeTrax lite and CeTrax mid are all-electric plug and drive solutions designed for use in delivery vans, light commercial vehicles up to 7.5 tons (CeTrax lite) as well as medium-duty commercial vehicles up to 19 tons (CeTrax mid). With these two solutions, the technology company aims to serve further market segments in the future and support the industry on its way to local zero-emission driving.

With **CeTrax lite** and **CeTrax mid**, ZF is expanding its electric drive portfolio for commercial vehicles in vehicle categories of up to 19 tons gross vehicle weight. What makes **CeTrax lite** and **CeTrax mid** unique is the electric central drive's integrated design, in which the electric motor, power electronics and transmission form a compact unit with a shared housing. This means that the power electronics do not need to be wired separately with the electric motor, as this connection already exists within the unit. Thanks to their compact design, both central drives can be installed flexibly in existing vehicle platforms, eliminating the need for major changes to chassis or axles by vehicle manufacturers.

"By using our CeTrax models' plug and drive concept, vehicle manufacturers can reduce development and installation expenditures," said Dr. Mark Mohr, head of Development for Commercial Vehicle Technology at ZF. "With this new concept, ZF is addressing the needs



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of manufacturers or fleet operators who are planning to switch from existing conventional models to an electric driving mode."

Synergies from passenger car development for a powerful accelerative force

CeTrax lite and **CeTrax mid** are equipped with the electric components used in the tried-and-tested central axle drive that ZF produces for passenger car applications. A transmission directly translates the electric asynchronous traction motor's output, which adds to the unit's compact design. Using the same components in passenger cars as well as commercial vehicles of up to 19 tons offers economically attractive solutions for commercial vehicle manufacturers. The mechanical components are all developed using the requirements of commercial vehicle operation, including the housing with its optimized components and mounting points.

In the **CeTrax lite**, an electric asynchronous traction motor offers a peak power performance of 150 kW and an impressive torque of 380 Nm. In terms of performance, this means CeTrax lite is equal to conventional units in this segment. The module is a fully integrated system, housing the electric motor as well as a 1-speed transmission stage and power electronics. Despite this, the CeTrax lite is conveniently compact and light at around 120 kg.

With its two electric asynchronous traction motors in a parallel design, **CeTrax mid** ensures powerful acceleration for vehicle weights of up to 19 tons. The system's peak performance lies at 300 kW, while a two-stage powershift transmission produces a torque of 760 Nm. Once again, fully integrated design allows easy installation in the vehicle. Standard axles with current ratios can still be used in combination with both ZF drives.



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Captions:

- 1) CeTrax lite, the electric central drive for delivery vans and light commercial vehicles up to 7.5 Tons, has a peak performance of 150 kW and a torque of 380 Nm.
- 2) CeTrax mid, designed for medium-duty trucks up to 19 tons, combines two electric asynchronous traction motors to achieve a performance of 300 kW and a torque of 760 Nm.

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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