

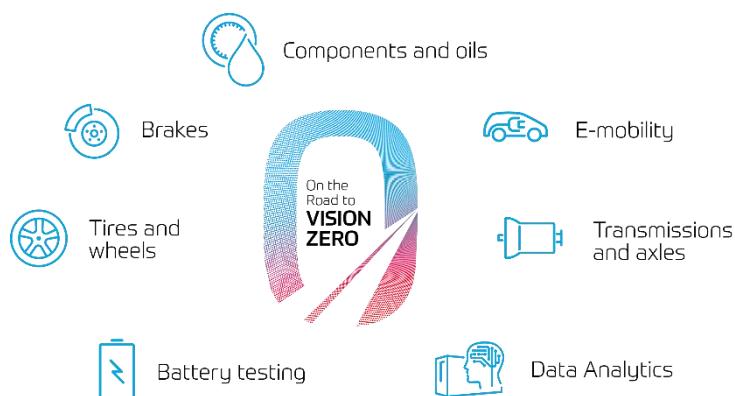


## ZF Test Systems

ZF Test Systems develops, produces and retrofits test systems for on- and off-road mobility. As specialists for validation and development test facilities, we improve the quality of driveline, active chassis, tires and wheels as well as brakes and thus contribute to enhanced safety and comfort for the driver. Besides that, we offer a broad portfolio to allow service providers and OEMs worldwide to certify their batteries for a passenger EV.

For us, there is no conflict between well-proven technology and innovative solutions. Rather these are the recipe for a reliable, customized test bench technology exactly tailored to the customer's specific requirements. We see ourselves as a complete system supplier and problem solver; with the experience and creativity of our employees we understand the customer's needs and requirements and find the ideal solution together.

Driven by the force and competence of a globally active engineering group, we are developing solutions for future mobility and are prepared for the forthcoming requirements like autonomous driving and E-mobility. We recognize sustainable trends early and are providing our customers with solutions to secure competitiveness also in the future.



**Future Mobility.  
Tested Now.**



# ZF Test Systems for E-Mobility

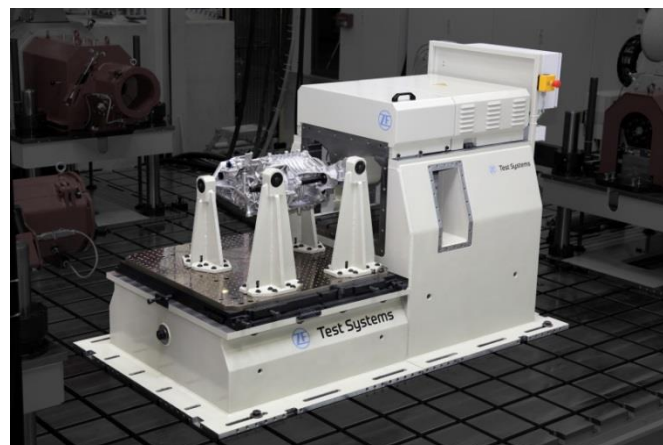
The new e-mobility test benches by ZF Friedrichshafen AG meet all requirements that arise as a result of the transition to electro mobility.

The core component of our test benches is a high-performance drive module. In combination with the drive bearing module and the receiving module for the test object, it combines to a complete test system.

The base for the receiving module is optionally fixed, inclinable and swiveling and available for single or multi-machine operation with or without cross table. Various optional modules complement the modular system. A receiving module for electric motors and one for coaxial test objects extend the possibilities of the test bench. An acoustic cabin for the drive module and an air conditioning cabin for the receiving module for the test object are also possible.

Due to the modular design, tests of conventional car transmissions can similarly be performed. The appropriate frequency converter and measurement technology, automation and a highly dynamic control perfect the system.

There are currently 4 models available:



- Test bench for e-motors, gearboxes, e-axes, e-powertrain, e-transmissions
- Up to 26.000 rpm
- Up to 620 kW (Overload)
- Up to 1200 Nm torque (Overload)
- Slim design
- Multiple installation options
- Acoustic / NVH package (optional)
- Air and media conditioning option

Test System	Nominal Power	Nominal Torque	Overload Torque	Nominal Speed	Maximum Speed
<b>TS drive.i26-600s</b>	420 kW	550 Nm	720 Nm	6,685 rpm	26,000 rpm
<b>TS drive.i23-500s</b>	420 kW	550 Nm	750 Nm	7,300 rpm	23,000 rpm
<b>TS drive.i20-800s</b>	500 kW	800 Nm	1000 Nm	6,000 rpm	20,000 rpm
<b>TS drive.i20-1000s</b>	525 kW	1000 Nm	1200 Nm	5,000 rpm	20,000 rpm