

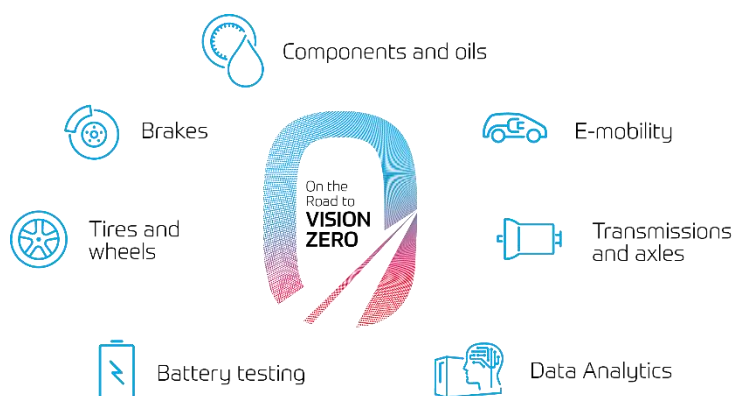


## ZF Test Systems

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.**

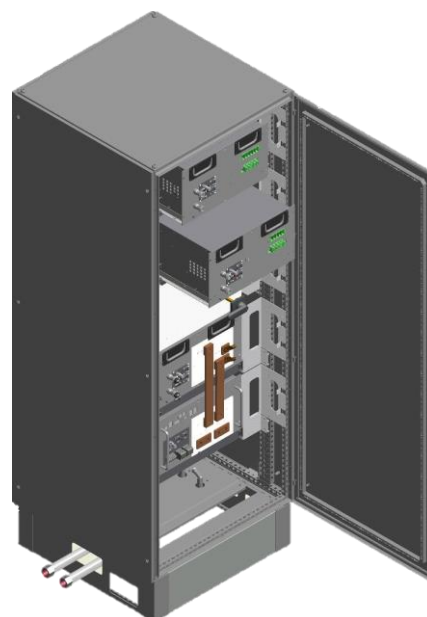


# ESYS.m – Battery Testing and Simulation

The ESYS.m modular test system is a universal DC source/sink for testing e-mobility high-voltage components in a compact and modular design with high efficiency due to design in SiC semiconductor technology.

Due to the 19" rack modules a fast service and expandability is given.

Furthermore, the modules can be linked by the user serially, in parallel or as a bridge.



## Key Benefits

- Many configuration options regarding system performance
- Regenerative DC voltage sources
- SiC power electronics for efficient and compact design
- Higher power direct parallel connect-ability
- Subsequent expandability in terms of power, current and voltage
- Due to 2nd voltage measuring range very well suitable for module and pack test
- Power in the loop with Inverter/ DCU setup

## Preferential configurations:

kW	V	A
100	600	-600 / +700
	1200	-300 / +335
100/200	600	-1200 / +1400
	1200	-600 / +670
	± 1200	-300 / +300
	± 600	-600 / +600
300	1200	-900 / +1000
400	1200	-1200 / +1340

## ZF Test Systems – ESYS.m

Many configuration options regarding the performance of the system

100kW..800kW / ±600V.. ±1200V / ± 600A..± 2400A (+2800)

+ Short service times

+ Simple spare parts inventory

+ Reusability of components in case of extensions

### High measurement and control accuracy

Current and voltage: 0.03% MSR

2<sup>nd</sup> Measurement Range (600V / 150V; 1200V / 120V)

**Galvanic Isolation between power supply and load side**  
with Integrated Isolation monitoring

**Water cooled:** low noise and low maintenance

**Safety functions:** RK-Off, StartStop, PL d (optional)

**Quick installation and commissioning on site**

