

KIEPE Test Center

HIGH RELIABILITY THROUGH EXTREME TEST CONDITIONS



At the KIEPE Test Center, we test and validate electric drive systems and power electronics components under realistic, reproducible conditions. With high-performance test benches, state-of-the-

art measurement technology, and many years of engineering expertise, we support manufacturers and developers in the development, validation, and certification of their products.

Features

Whether complete powertrains, individual components, or customer-specific load profiles.

Our tests cover a wide range of performance and voltage parameters and are suitable for applications in rail, e-mobility, commercial vehicles, and industrial drive systems.

Tests can be conducted by our experienced test center team, in collaboration with your specialists, or with project-specific support.



Applications

Testing services for rail, e-mobility, commercial vehicles, and industrial drives.

At the Kiepe System Test Facility, we test both complete electric powertrains and individual power electronics components.

The test portfolio includes electric motors,

inverter-motor combinations, complete electric drive units, and selected components.

The test stands are designed for high speeds, high torques, and real-world operating conditions.

Examinations

To verify suitability, tests are conducted in accordance with specific standards. These include, in particular:

- EN 61287-1: Power Converters on Rail Vehicles
- EN 50155: Electronic Equipment on Rail Vehicles
- EN 61377: Combined Test Method for Traction Systems
- EN 50121-3-2: Electromagnetic Compatibility – Railway Vehicles – Equipment
- EN 50500: Method for measuring the magnetic field strengths generated by electronic and electrical equipment in the railway environment with regard to human exposure
- ECE R85: Motor Vehicles–Measurement of the Power of Electric Propulsion Systems

- ISO 16750-2: Road vehicles–Environmental conditions and testing for electrical and electronic equipment–Part 2: Electrical stresses

For tests that cannot be conducted in-house, such as radiated emissions and immunity to electromagnetic radiation in devices, as well as shock and vibration testing, we maintain close ties with external testing laboratories.

Testing of radiated emissions from vehicles in accordance with EN 501213-1 (Electromagnetic Compatibility–Railway Vehicles–Trains and Complete Vehicles) or ECE R10 (Motor Vehicles–Electromagnetic Compatibility) is conducted on-site on the vehicle by our own employees.



Technical Data

3 testing stations with

DC voltage	0 - 1000 V
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Dynamometer	500 kW or 620 kW
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2 testing stations with

DC voltage	0 - 2000 V
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Dynamometer	500 kW or 620 kW
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1 testing station with

DC voltage	0 - 3600 V
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AC voltage	11 - 18 kV, 17,7 Hz
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AC voltage	17 - 30 kV, 50 Hz
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Dynamometer	1,4 MW
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3 testing stations with

DC voltage	0 - 4500 V, up to 562 kVA
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AC voltage	0- 3600 V, 50 Hz, up to 780 kVA
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AC voltage	700 - 1300 V, 16 2/3 Hz, up to 186 kVA
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Änderungen vorbehalten.

