



Test center for characterizing two motor axle drives
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Test benches

Test center for characterizing two motor axle drives

- Torque: 1400 Nm / 3000 Nm
- Max. speed: 20 000 rpm
- Max. power: 275 kW
- DC Supply: 800 V / 500 A

Megawatt motor test bench

- 1 MW mechanical load machine
- Different gear ratios with up to 35 000 rpm (high speed), or 7500 Nm (high torque)
- 1 MW DC voltage sink and source with up to 1 kV DC

Industries & Applications

- Aviation traction motors
- Automotive traction motors
- Commercial vehicles
- Compressors for fuel cell stacks
- Auxiliary motors
- AI based fault detection

Contact

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**Customized Innovative Solutions
for Electrical Machines**

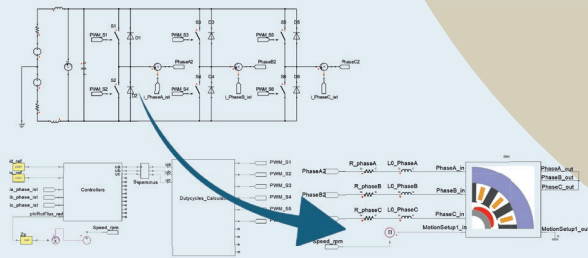
**Electric Machines
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Study, Design, Prototyping, and Test of electric machines and drive systems

Co-Simulation

- Simulation of interaction motor / inverter
- Motor control development
- Effects on efficiency, etc.



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Traction motor for aviation application with direct oil cooling for hairpin stator winding
750 kW, 800 V, 21 000 rpm

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Thermal Design

Actuator with redundant winding for door-opening mechanism of a future aircraft
1 kW, 48 V, 4.200 rpm

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Electro-magnetic Design

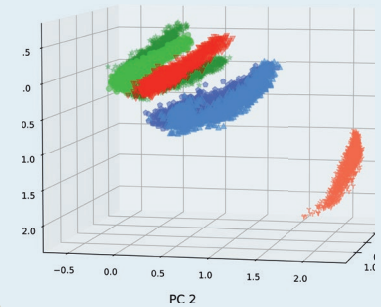
Mechanical Design

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High speed machine for compressor in hydrogen fuel cells
80 kW, 800 V, 150.000 rpm

Data Analytics

- Cognitive Power Electronics
- Detection of motor faults without any additional sensor



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Inverter power electronics

- Development and prototype realization of inverter
- Wide variety of inverter topologies (Multilevel, Multiphase, etc.)
- Focus on SiC and GaN