

Contracted E-Motor Testing

quick • precise • reliable



We offer our expertise and test stands as a contracted testing service

Your contracted testing - performed on our E-motor test stands



In the development of new drivetrain concepts and electric motors, as well as with quality assurance, it is crucial for a successful product to be quickly and efficiently tested.

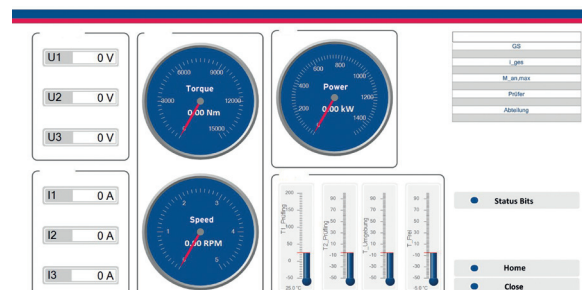
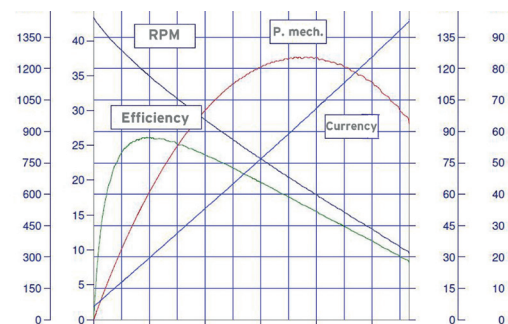
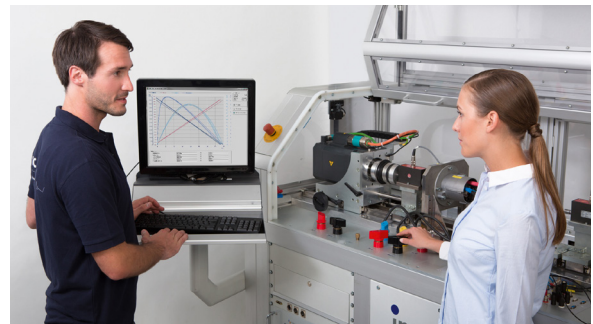
imc offers a wide range of services related to the testing of electric motors: from on-site consulting and load testing, to the complete measurement of your electric motor. With our in-house E-motor test stands, we can test a variety of electric motors and components for you. For every type of test performed, you will receive all of the measurement data as well as a comprehensive test report with result data.

What can we test for you?

- EC-motors
- DC-motors
- 1- and 3-phase AC-motors
- Capacitor motors
- Components such as gearboxes, steering systems, etc.

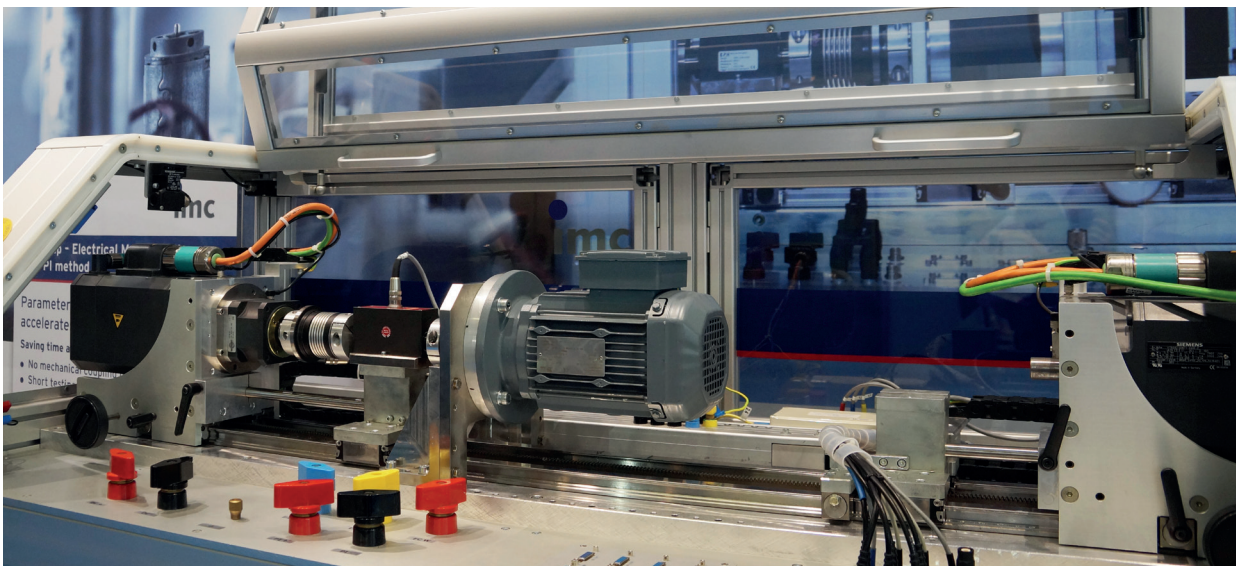
What types of testing does imc offer?

- Characteristic curve recording/testing
- Cogging torque, static and kinetic friction measurements
- Thermal motor design based on nominal operating modes
- Back EMF testing: the DUT is driven by the load machine and the voltage induced in the stator winding is measured. The DUT is brought to a predetermined speed in a defined time.
- E-motor mass inertia simulation
- Parameter identification testing of DC motors
- Parameter identification testing of EC motors
- EC motor testing with integrated controller via CAN, CANopen, LIN and more
- Determination of flux table for EC motors
- Automated test sequence following diverse test plans



The adaptable solution:

The imc testing concept enables a customer-specific design of hardware components, thus optimally catering to each specific DUT. With this approach, for example, the customers could use their own controller or opt for using a standard one. Voltage, current, speed and torque ranges can also be specified as per customer request. The overall system can be expanded at any time. The heart of the test stand features an imc measurement device working together with the real-time processing of imc Online FAMOS. The imc solution allows for both the logging of all necessary measurement variables, as well as the entire control of all relevant system components.

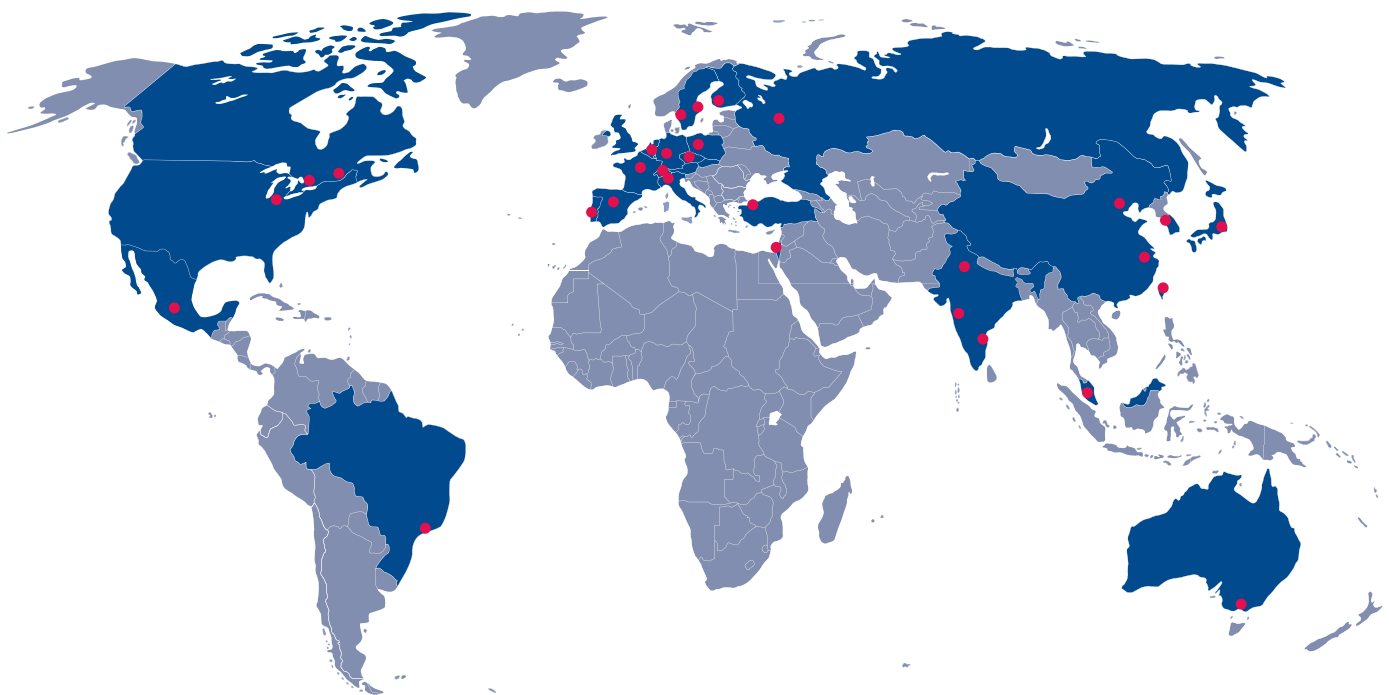


Performance data of the EC06 test stand:

- Two synchronous servomotors as load unit:
 - Nominal torque: 5.5 Nm
 - Standstill torque: 13 Nm
 - Speed: max. 7,900 rpm
 - Planetary gear attachment with $i = 5$ gear ratio possible
- DC power supply:
 - 60 V, 200 A, 12 kW
- Electronic load:
 - max. 50 A
- Internal EC motor controller
- External EC motor controller or use of EC/BLDC test object with its own controller
- Dual-range torque transducer with 10/50 Nm

Our worldwide imc partner network

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