Mobile Test Bench

Mobile Test Bench with Single Sensor

For research and development.

A mobile standalone workstation for magnetic field scans of rotors with a single 3D sensor. It records all three field components at ultra high resolution; a full scan takes approx. 30 seconds to 5 minutes, depending on resolution.



At a glance

- ✓ 3D magnetic field sensor for detecting B_x, B_y, B_z
- ✓ Full scan in approx. 30 seconds to 5 minutes, depending on resolution
- ✓ Mobile standalone workstation
- ✓ Automatic pass/fail evaluation
- ✓ Magnetic imbalance analysis for each individual pole
- ✓ Fault localization even in multilayer embedded magnet structures
- ✓ Laser distance measurement with 1.4 µm resolution
- ✓ All metrological components are DAkkS-calibratable

Specifications

Technical details

- 3D magnetic field sensor for detecting B_x, B_y, B_z
- Laser distance measurement resolution: 1.4 µm
- Linear speed: 250 mm/s
- All metrological components are DAkkS-calibratable
- Runout and temperature monitoring
- Sensor collision monitoring
- Max. rotor diameter (PSM, EESM): 250 mm
- Max. part length: 500 mm (PSM, EESM), 400 mm (linear motor magnet tracks)
- Measurement range: ±0.5 / 1 / 2 T
- Vertical resolution: 24-bit quantization interval
- Rotor axis resolution: 5.5 arc seconds
- Linear measurement resolution: 50 nm
- Rotation speed: 10 variable speed settings from 30°/s to 500°/s
- Rotor temperature range: 20 °C – 55 °C
- Automatic test plan selection via serial number scan
- Unlimited rotor contour storage
- Measurement of rotor shaft magnetization / resolver influence
- Flexible sensor positioning
- Variable air gap
- Optimized for crane loading and industrial handling
- No magnetic components that add noise to the measurement

Data processing

- 3D visualization of the magnetic field
- Automatic generation of test reports
- Automatic data archiving
- Database connectivity available
- Trend analysis across multiple measurements

Optional features

- Programmable external excitation in various current and voltage modes
- Automatic and interchangeable slip ring contacting for different rotor variants
- Recording of current/voltage/temperature profiles
- Four-wire resistance measurement

Get in touch

Koob Testsystems GmbH
Am Weinberg 5, 98631 Grabfeld, Germany
+49 (0) 36944/54800 · info@koob-testsystems.de
www.koob-testsystems.com

Subject to technical changes. Specifications depend on the configuration; the values in our quotation are binding.