

PORTABLE IDS

Inertial Dynamometer System

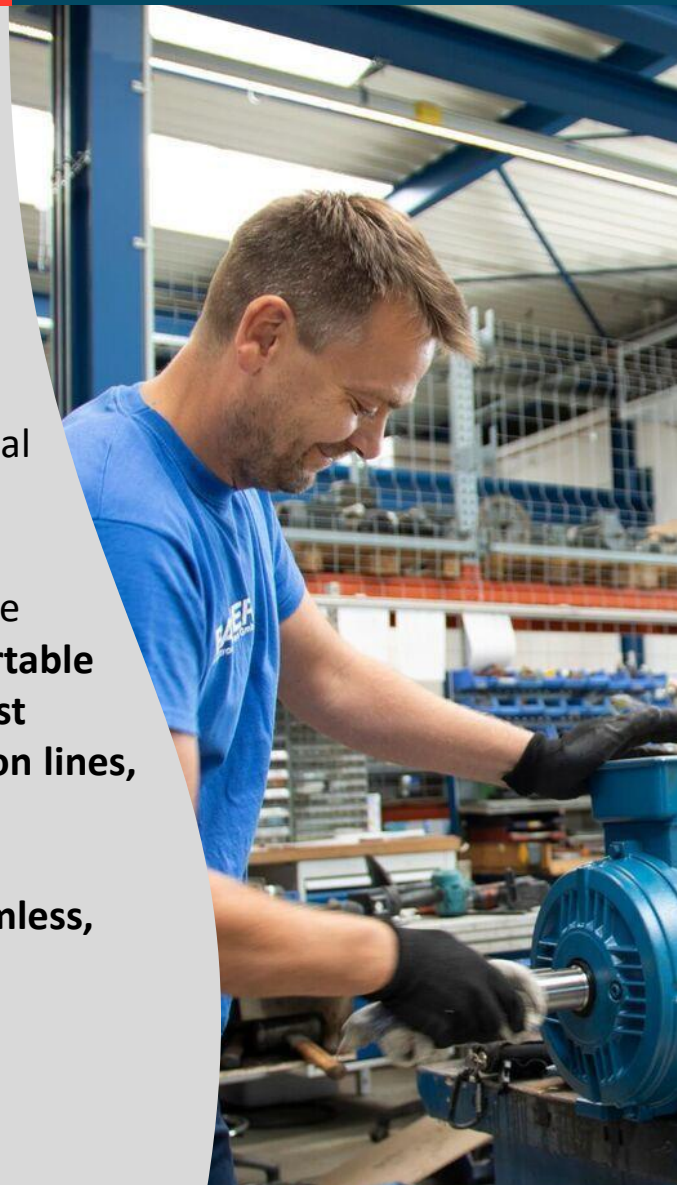
Empowering Field Engineers:

Precision Motor Testing, Anytime, Anywhere.

Experience the power of **fast, accurate, and load-free** motor testing with Motomea's **Portable IDS Solution**. Designed for ultimate convenience, this **compact and patented** system delivers **full-load performance analysis** without requiring an external mechanical load.

With real-time results, advanced friction and ripple torque analysis, and customizable reports, the **Portable IDS** empowers engineers and manufacturers to **test motors in any environment**—R&D labs, production lines, or **directly in their applications**.

Built for reliability and ease of use, it ensures **seamless, data-driven diagnostics** wherever you need it.

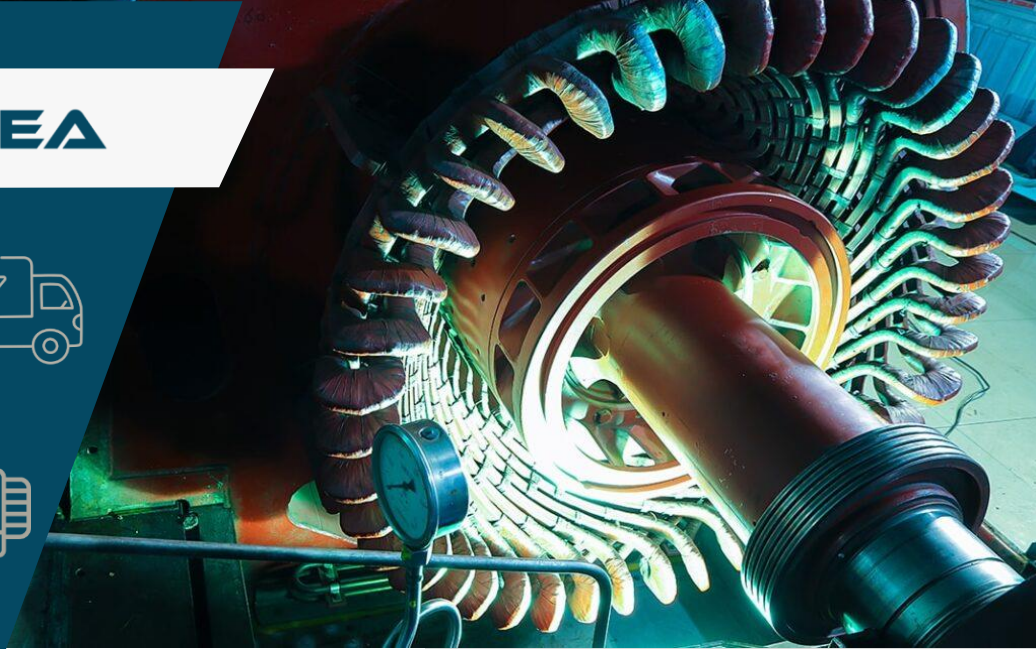
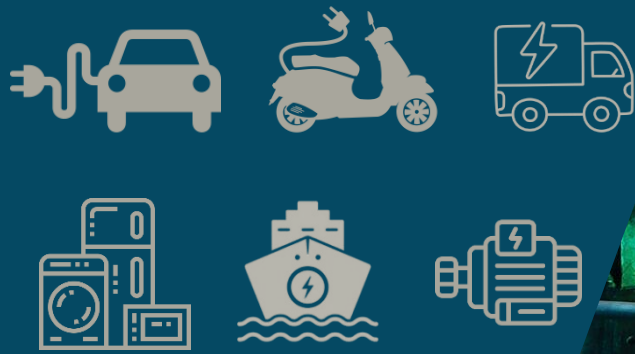


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BENEFITS

- **Full Load Performance Testing:** Measures torque, current, voltage, power input, power output, and power factor, from stall to no-load, without the need for an external mechanical load.
- **Comprehensive Data Insights:** Provides **RMS**, **AVG**, and **real-time** results for accurate performance analysis.
- **Advanced Friction Analysis:** Evaluates **friction torque**, **friction power output**, and **friction spectrum** to detect efficiency losses.
- **Precision in Dynamic Testing:** Captures **ripple torque**, **cogging torque level**, and **vibration sources** for in-depth motor diagnostics.
- **Wide Frequency Spectrum Analysis:** Displays **speed** and **torque spectrum** across a broad frequency range.
- **User-Controlled Motor Power Switching:** Ensures flexibility in testing operations.
- **Customizable Reporting:** Generates **Excel** and **PDF test reports**, tailored to user requirements.
- **Time-Based Data Visualization:** Displays all performance results versus **time** for trend analysis.
- **Application-Based Testing:** Motors can be tested **within their operational environment** for real-world performance validation.
- **Enhanced Safety:** Designed with **short-circuit protection**, ensuring secure and reliable operation.

COMPREHENSIVE MOTOR TESTING



ENSURING
PRECISION,
PERFORMANCE,
AND RELIABILITY
WITH ADVANCED
DIAGNOSTICS AND
SAFETY FEATURES



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Portable IDS: Flexible Motor Testing Anywhere

With the **Portable IDS**, we're revolutionizing motor testing by offering a portable solution that can be used anytime, anywhere. This system enables testing of motors on the go, allowing for unprecedented flexibility and convenience.

One of the key features of **Portable IDS** is its ability to optionally upload all motor diagnostics and test data to a secure public cloud or a secure customer-specific cloud. This ensures that users can access their test results from any location while maintaining control over data security and compliance requirements. In essence, Portable IDS is not just a portable system for motor testing, but a comprehensive solution that seamlessly integrates secure cloud-based data storage and analysis, enabling flexible and efficient testing experiences.

General Specifications

Calibration Calibration controlled by system software. Calibration data is stored locally.

Internal Power Analyzer

Electronic Input

Voltage 110-230 V \pm 10%

Frequency 50/60 Hz

Motor Input

Voltage Range Using voltage 40 kV

Frequency 47-63 Hz

Accuracy \pm 0.2%

Performance Testing

Supported Tests Torque, speed, current, voltage, power input, power output, power factor, time, efficiency, frequency, direction of rotation

Optional Tests Speed & torque spectrum, speed & torque oscillations, friction torque, friction spectrum, cogging torque level

System Accuracy \pm 0.2%

Sensor Speed Range Up to 60000 rpm. Industry standard. Accuracy: \pm 0.3°.

Test Examples

Measurements at 1600 V, 2700 V, and 3300 V after parabolic compensation to 6000 V

(Manufacturer's measurements are shown in the red curve)

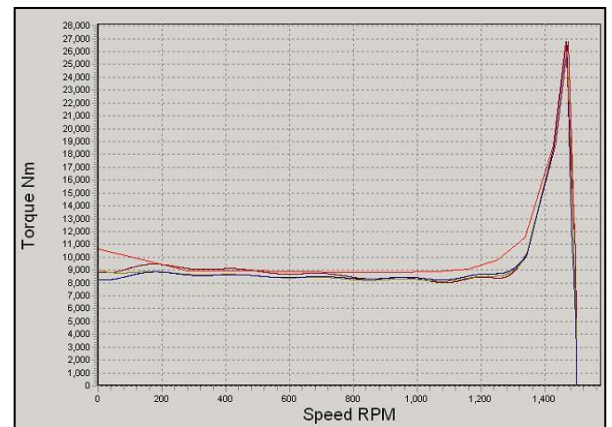


Figure 1 - Torque vs. Speed

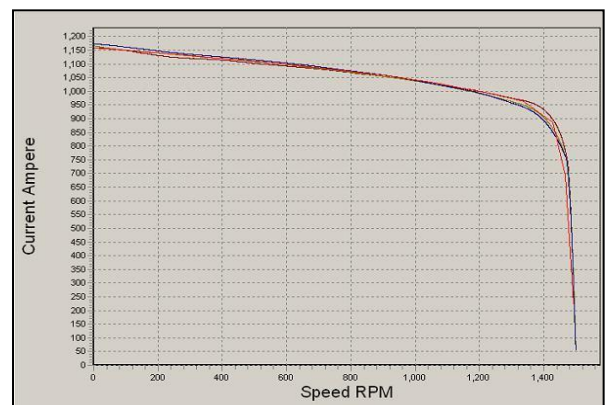


Figure 2 - Current vs. Speed



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**NO LAB?
NO PROBLEM.
TAKE TESTING
ANYWHERE**

**BUILT FOR
ENGINEERS
READY FOR
THE FIELD**

COMPONENTS OF THE PORTABLE IDS

- **Portable IDS Suitcase** – Rugged, electromagnetic-shielded housing designed for durability in factory and field environments.
- **Portable PC with IDS Software** – Compact, high-performance computing unit for real-time motor diagnostics and data management.
- **High-Precision Power Analyzer** – On-the-go power measurement tool ensuring accurate motor performance analysis.
- **Smart Sensor Kit** – Includes torque, vibration, and temperature sensors for comprehensive diagnostics.
- **Plug & Play Cable Set** – Pre-configured cables and clamps for quick and easy motor connection.
- **Secure Cloud Connectivity Module** – Enables seamless data transfer to secure cloud storage for remote monitoring and predictive analytics.
- **Rechargeable Battery Pack** – Ensures extended operation time without reliance on external power sources.
- **Industrial-Grade Connectivity** – Supports Wi-Fi, Ethernet, and Bluetooth for flexible data transfer options.

Contact us



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