

SPM LEONOVA DIAMOND EXPERT PORTABLE INTELLIGENCE FOR ADVANCED BEARING DIAGNOSTICS

A new premium diagnostic service by Trans Lex Work

With more than **30 years of experience** in **rotating machinery installation, maintenance, and condition monitoring**, Trans Lex Work continues to expand its service portfolio with **cutting-edge diagnostic solutions**. The introduction of the **SPM Leonova Diamond Expert** marks a **new level in bearing diagnostics and proactive maintenance support**.

This **advanced system** enables **early fault detection, precise condition assessment, and lubrication optimization** for **rolling element bearings** and other **critical rotating equipment**, helping our partners achieve **higher reliability and lower lifecycle costs**.



Why Leonova Diamond Expert?

The **SPM Leonova Diamond Expert** is one of the **most advanced portable condition monitoring and vibration diagnostic instruments**, built on more than **40 years of Shock Pulse Method expertise**.

Designed to support **proactive and predictive maintenance strategies**, the system focuses on **extending machine and bearing lifetime through early detection of mechanical degradation and continuous lubrication monitoring**.

The instrument provides **immediate insight** when:

- **lubrication film conditions begin to deteriorate,**
- **early-stage mechanical damage develops,**
- **installation or alignment issues affect machine health.**



This enables **corrective action** well before **failures impact production or safety**.

Advanced diagnostic technologies in one portable solution

◆ **True SPM® Method** - A measurement technique **uniquely developed for rolling element bearings**, delivering **accurate information on lubrication quality and surface condition** throughout the **entire bearing life cycle**.

◆ **SPM HD® – High Definition Shock Pulse**

A **patented technology** capable of detecting **bearing faults and lubrication issues** with **exceptional sensitivity**, even at **very low or very high rotational speeds**. Reliable operation is ensured from **1 rpm to 20,000 rpm**, providing **outstanding early warning capability**.

◆ **EVAM® vibration analysis**

Comprehensive machine condition evaluation based on **multiple vibration parameters**. **High-resolution spectra up to 40,000 Hz**, combined with **zoom and envelope analysis**, enable **precise fault identification**.

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◆ **HD Order Tracking**

High-accuracy speed tracking using tachometer or Keyphasor signals, particularly valuable for balancing tasks and resonance investigations.

◆ **CondID® RFID címkék**

Automatic identification of measurement points and secure data handling ensure fast, reliable, and error-free data collection in the field.

Condmaster® Ruby software - From data to decision

Condmaster Ruby serves as the analytical core of the Leonova Diamond Expert system. It collects, processes, and visualizes measurement data, transforming raw signals into actionable maintenance insights.

Key capabilities include:

- comprehensive bearing and lubricant databases,
- bearing lifetime calculation and ISO 10816 limit evaluation,
- trend analysis and automatic alarm management,
- remote condition monitoring via CondmasterWEB,
- intuitive spectrum comparison and professional reporting tools.



Flexible diagnostics for a wide range of applications

The Leonova Diamond Expert integrates multiple diagnostic modules in one scalable platform:

- **Platform:** vibration, speed, and temperature monitoring in accordance with ISO standards
- **Frontliner:** bearing condition monitoring and general machine health assessment
- **Analyser:** advanced vibration analysis, including orbit, run-up, and coast-down studies
- **Balancer:** single-plane and two-plane rotor balancing

Its lightweight, rugged design makes it ideally suited for on-site field work and industrial plant environments.

New value for our partners

By deploying the Leonova Diamond Expert, Trans Lex Work delivers a premium diagnostic service portfolio, including:

- rolling element bearing diagnostics and lubrication condition assessment,
- advanced vibration analysis and fault trend evaluation,
- on-site condition surveys with expert interpretation,
- rotor balancing in single and two planes,
- vibration reduction recommendations,
- data-driven expert reports supporting maintenance optimization.

Key benefits

- **Early fault detection**
Identification of bearing and lubrication issues before damage occurs.

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- **Lower maintenance costs**
Condition-based interventions replace reactive repairs.
- **Improved operational reliability**
Critical machine components are continuously monitored.
- **Data-driven maintenance decisions**
Objective measurement data supports transparent planning.
- **Flexible service delivery**
On-site diagnostics combined with remote condition monitoring.

Intelligent diagnostics for reliable operation

The **SPM Leonova Diamond Expert** represents the **latest generation of vibration and bearing diagnostic technology**. It delivers **precise, fast, and cost-effective insight** into **machine condition**, supporting **safer, more efficient, and more economical operation**.