



Marposs at IMTS

At IMTS 2026, Marposs will present a selection of new solutions for quality control, tool diagnostics, and machine tool integration. These developments cover a broad range of manufacturing processes, including grinding, turning, and electric powertrain applications, with a focus on improved measurement precision, and process reliability.

As part of Marposs' "Lights-Out Manufacturing" theme, these technologies demonstrate how intelligent measurement, process monitoring, and machine protection work together to support reliable, unattended production with minimal operator intervention.

VTs: Automated Tool Inspection and Wear Detection

The **VTs (Visual Tool Setter)** is a non-contact optical system designed to inspect and measure cutting tools using CCD sensors and shadow projection. At IMTS 2026, Marposs will introduce a significant enhancement to the system: the new **Surface Integrity Check** software. This feature enables automatic detection of tool wear **without requiring reference images**, making it suitable even for tools that have not been previously inspected. To support this function, VTs is now equipped with a **six-LED light ring** that eliminates reflections and unwanted shadows, ensuring consistent image quality and more reliable analysis across a wide range of tool types.

Integrated with the CNC, VTs enables automatic inspections during the machining cycle, transmitting tool wear status directly to the machine. Operators can view high-quality images directly from the machine control, reducing machine stoppages and eliminating the need for manual microscope inspections. This marks a step toward in-process metrology and smart automation.

ML3G: Precision and Reliability in Laser Tool Measurement

Among the highlights at IMTS 2026 is the **ML3G**, a new **non-contact tool measurement system** based on laser technology. Developed for use with small, delicate, or coated tools, ML3G enables rapid and precise measurements directly at real operating speeds, helping eliminate errors caused by runout and dynamic variations.

Building on Marposs' experience in laser-based tool measurement, ML3G introduces several enhancements, including a high-performance processor for faster data processing,



redesigned shutters for improved sealing, an integrated air blower for tool cleaning, and a reinforced mechanical structure to ensure stability in challenging industrial conditions. With four available lengths and three mounting configurations, the system offers flexibility for a wide range of machine tools.

Grinding: New Developments in Process Monitoring

For the grinding sector, Marposs will showcase process technologies focused on improving monitoring, control, and data management.

- The **OTX system** provides grinding wheel balancing and vibration control at high spindle speeds using ultrasonic sensors to detect and process vibration signals, helping maintain machining stability and surface quality.
- The **BLÚ system** is a centralized platform for managing sensor data on machine tools. Featuring the new **RECORDING** function at IMTS 2026, it enables continuous tracking and storage of process data for external analysis, supporting advanced diagnostics and AI-based optimization. The Protomar Mini measuring gauge integrates with BLÚ to provide compact, high-precision measurement for grinding machines and flexible machine tools.
- The UNIMAR measuring heads provide flexible real-time process control for grinding and precision machining applications, supporting ID and OD grinding with accurate In-Process, Pre-Process, and Post-Process gauging capabilities.

Gauging: Advancements in Handheld Post-Process Measurement

Marposs will showcase the I-Wave2 wireless gauging system with Merlin Plus, providing a flexible solution for handheld, off-line measurement and quality inspection. The I-Wave2 smart gauge delivers sub-micron precision with a rechargeable wireless design and integrated display, allowing operators to quickly verify part dimensions on the shop floor. Combined with Merlin Plus for measurement data collection and analysis, the system supports manual inspection of internal diameters, external diameters, and gap measurements.

NVH G-EAR: Advanced Gear Quality Inspection

With the growth of electric and hybrid vehicles (EV/HEV), transmission noise has become a critical factor in vehicle quality. Marposs NVH G-EAR tester evaluates individual gears

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before assembly using Single Flank rolling technology to detect surface defects, machining distortions, and noise-related issues. By identifying macro- and micro-geometry defects, the system helps improve gear performance and production quality.

Together, these technologies demonstrate how Marposs is helping manufacturers move toward Lights-Out Manufacturing by combining intelligent measurement, process monitoring, and machine protection to enable smarter, more reliable production around the clock.

Visit Marposs at IMTS 2026, located in East Hall, Level 3 in booth# 134324 to discover how Lights-Out Manufacturing can help your operation increase productivity, improve quality, and maximize machine utilization, 24 hours a day, 7 days a week.

ABOUT MARPOSS

MARPOSS was founded in 1952 and Mr. Francesco Possati is the President of the Group; it provides shop-floor solutions for measurement, inspection and testing in the production environment. Marposs' solutions include gauging equipment of mechanical components, before, during and after the production process; monitoring solutions on machine tools; assembly and testing for many industry sectors; and automatic machines and inspection stations for production lines. MARPOSS is one of the main suppliers to the automotive industry providing solutions for both traditional and electric mobility but additionally operates in the aerospace, biomedical, hi-tech, white appliance, and glass containers industries. MARPOSS Group employs 3200 people around the world and is present in 34 countries with more than 80 sales offices.