

metrik

Precision Measurement System for Cylindrical Components

PSARON

Professional Metrology. Industrial Ruggedness. Disruptive Value.

3D metrology for

**cutting tools
cylindrical parts
precision components**



Designed for quality control, R&D and metrology laboratories requiring fast, quantitative 3D dimensional analysis

AUTOMATED ACCURACY

Fully automated dimensional and geometric measurement of cylindrical parts, with programmable inspection routines.

HIGH PRECISION

Achieves micron-level precision across all critical dimensions—diameter, length, thread geometry, and surface profile.

RELIABLE PERFORMANCE

Engineered for industrial use, with robust components rated for continuous operation and maintenance-free accuracy.

APPLICATIONS

Supports screws, bolts, shafts, cutting tools, and custom cylindrical components—ideal for quality control in aerospace, medical, and manufacturing industries.

Schedule a Demo: info@psaron.com



Precision Measurement System for Cylindrical Components

TECHNICAL SPECIFICATIONS

Model	M1
Max. Sample Diameter (mm)	25
Max. Sample Length (mm)	150
Accuracy (mm/deg)	±0.005 / ±0.1
Repeatability (mm/deg)	±0.001 / ±0.05
Resolution (mm)	0.005 (scan)
Sample Chuck	High-precision motorized rotation stage for full 360° profiling with integrated motorized magnetic chuck.
Motorized Vision Unit	Axial measurements of parts up to 150 mm, with programmable step size for high-resolution scanning.
Vision System	High-resolution industrial camera integrated with telecentric optics.
Illumination	Precision telecentric backlight illumination.
Measured Sample Types	Screws, bolts, threaded rods, Cutting tools (drills, end mills, taps, reamers), Cylindrical shafts, pins, rods, other axis-symmetric and custom-shaped cylindrical components.
Measurement Workflows	Supports automated and user-defined measurement sequences for different cylindrical geometries with variable length, diameter, thread and flank angles.
International Standard Compliance	Measurement algorithms comply with international standards.
Calibration	Automatic system calibration using certified reference rods.
AI Metrics	AI-Powered Scoring System: Evaluate production quality with intelligent grading algorithms; Smart Statistical Analysis: Leverage advanced filtering and multivariate analysis for insights; Comprehensive Data Visualization: Generate detailed run charts, capability indices, control charts (X, R, C, U, NP, P, I, MR), and Pareto analysis; In-Depth Insights: Visualize confidence intervals, explore correlation analysis, and uncover relationships between parameters.
Reporting	Excel format, customizable with customer logo. Custom reports based on user-defined standards.
Device Database	Systematic archiving of measurements, reporting saved measurements, raw data storing.
Software Language	English
Electronic Controller	USB 2.0 / USB 3.0 interface Power Supply: 19 V / 5 A
Operating Temperature (°C)	5-45
Dimension (WxLxH in mm)	770 x 365 x 545
Weight (kg)	35