

Portable Surface Roughness Tester Touchscreen Gauge With Integrated Thermal Printer

Item Number: DS11



Introduction

Inspect surface quality anywhere with this portable surface roughness tester featuring a color touchscreen graphic display integrated high speed thermal printer real time waveform analysis advanced curve evaluation and rechargeable battery operation for workshop and laboratory verification.

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Application	Description	Key Benefit
Precision Machining & Tooling	Verifying surface texture on milled, turned, and ground metal components directly on machine tools.	Eliminates scrap by catching surface finish degradation and cutter wear in real time before batch completion.
Battery Electrode & Foil Research	Measuring the surface roughness of copper and aluminum current collectors and coated electrode layers.	Ensures uniform slurry adhesion and consistent electrochemical interface bonding in cell assembly.
Automotive Powertrain Manufacturing	Inspecting cylinder bores, camshafts, crankshaft journals, and transmission gear tooth profiles.	Optimizes lubrication retention, reduces friction losses, and guarantees strict compliance with NVH standards.
Aerospace Component Finishing	Evaluating surface roughness of critical structural brackets, turbine blade roots, and hydraulic pistons.	Assures fatigue resistance and stress-crack prevention on safety-critical machined alloys.
Quality Assurance & Receiving Inspection	Conducting rapid incoming part audits in metrology labs and receiving inspection staging areas.	Accelerates supplier part qualification with immediate printed Pass/Fail reports and profile records.
Advanced Ceramics & Metallurgy	Analyzing the surface micro-topography of sintered structural ceramics, molds, and powder compacts.	Verifies micro-porosity distribution and post-sintering surface refinement without destructive sectioning.
On-Site Field Audits & Plant Maintenance	Performing preventive maintenance and repair audits on large industrial rollers, shafts, and vessels.	Provides completely untethered, self-contained inspection capability in remote or confined industrial spaces.

Specification Parameter	Technical Detail (DS11)
Product Item Number	DS11
Display System	Large high-visibility color graphic LCD with resistive/capacitive touchscreen interface
Graphical Visualization	Real-time surface roughness waveform, calculation results, measurement conditions, large-font readouts
Integrated Output Subsystem	Built-in high-speed thermal printer (supports text, tolerance stamps, and graphic profiles)
Printing Orientation Modes	Standard portrait text output and landscape (horizontal) graphic display-matched mode
Specialized Curve Computations	Abbott-Firestone Bearing Area Curve (BAC), Amplitude Distribution Curve (ADC)
Quality Decision Functions	Programmable upper/lower tolerance limits with automatic Pass/Fail (Go/No-Go) judgment
Power Architecture	Built-in high-capacity rechargeable battery pack with universal AC power adapter/charger
Operating Environments	Quality control laboratories, precision machining workshops, active production lines, field maintenance sites
Surface Profile Processing	Multi-parameter surface evaluation, standard roughness profile filtering, and micro-geometry analysis
UI Navigation	Full touchscreen navigation with optimized single-touch measurement triggering and condition presets

Specification Parameter	Technical Detail (DS11)
Data Documentation	Direct on-instrument waveform display, memory storage, and simultaneous hardcopy thermal generation