Surface Roughness Testers

- ULTIMATE USER-FRIENDLINESS
- LEADING DEPENDABILITY AND RELIABILITY
- STRICT COMPLIANCE WITH INDUSTRY STANDARDS
- STOCKED CONSUMABLES AND SPARES
- TRUSTED AFTER SALES TECHNICAL SUPPORT
- LIFETIME PRODUCT SUPPORT ADVANTAGE

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Description

The surfaces roughness tester is a small handheld instrument, for shop floor use and mobile measure, it operation simple, function overall, measure fast, accuracy stability, take convenience. This tester applies to production site and can be used to measure surface roughness of various machinery-processed parts. This tester is capable of evaluating surface textures with a variety of parameters according to various international standard. The measurement results are displayed digital/graphically on the color graphic LCD display, And output to the printer.

Features by Model

NG-SR100-T System

- Portable & economical
- Large measuring range suitable for surface roughness testing of metal and non-metallic materials
- Robust and durable design with anti-electromagnetic interference ability
- High-speed DSP processor for maximum speed of data processing and calculation
- LCD with wide temperature ranges using OLED color display, high brightness and no visual angle interference, making the system suitable for various occasions.
- Long-life lithium ion rechargeable battery can work for a long time with no impact on memory data loss.
- Dedicated charger or computer USB port for charging
- Real-time monitoring of lithium battery power and display with alert function for operator
- Automatic shutdown function and low power design of software and hardware of the instrument designed for in-field long-lasting use.
- Optimized electric circuit design with transducer structure-design.
- The system can test ex-circle, flat surface, conical surface and also test groove larger than 80x30mm

NG-SR200-T and NG-SR300-T System

- Electromechanical integration design allowing for a compact, light weight system with extremely user-friendly
- Using DSP chip to control and process data with high speed and low power consumption
- 128 x 64 mm OLED dot matrix display with digital / graphic display
- Intuitive and rich display of all required parameters and graphics
- Compatible with ISO, DIN, ANSI, JIS national standards;
- Continuous work time of over 20 hours.

- Real-time clock settings and display with convenient data recording and storage.
- Automatic sleep mode and automatic shutdown and power saving mode
- Can be connected to a computer and printer;
- Optional sensor upgrades, measuring platforms, mini printer, extension rods and other accessories.
- Plastic shell, inspired by “TRANSFORMERS” with stylish and compact design, with extreme high reliability.
- Bluetooth function
- APP data acquisition and management option

NG-SR400-T System

- Mechatronics design with embedded printer can directly print out measurement results and graphics
- 320μm large measuring range (upgrade to 640μm, optional) inches color graphic LCD touch screen with backlight provide high brightness and wide viewing angle
- Easy button and touch screen dual operation
- The display information is rich, intuitive, and displays all parameters and graphics
- Compatible with ISO, DIN, ANSI, JIS and many national standards
- Built-in lithium-ion rechargeable battery, charging control circuit, high capacity, no memory effect
- Includes charge indicator, charging hint
- Continuous working time is more than 50 hours
- Large internal memory: 100 groups of original data and waveform can be stored
- Real-time clock setting and display, convenient for data recording and storage.
- Comes standard with automatic sleep, automatic shutdown and other power-saving functions
- Reliable circuit and software design to prevent the motor for getting stuck

- External drive unit allows more flexible measurement on side, upper, and other measurement orientations.

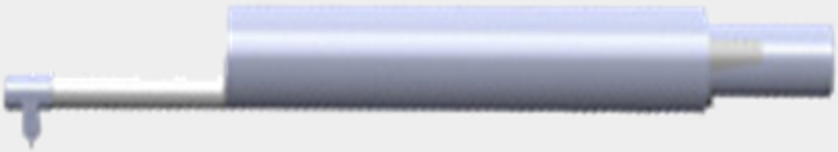
Measuring Principle

Surface roughness testers offers a linear roughness measurement. This is done by tracing a mechanical tip along a surface to measure roughness along an arbitrary line. As the equipment evolves in sophistication, manual contact methods may be replaced by last, optic and other testing processes for faster and more user-friendly results. Contact our quality consultants today to help identify which surface roughness testing system would be the optimal solution for your testing needs.

The surface roughness values are normally displayed in Ra, which is the average absolute deviation from a central line of a surface. Additional values include the Rq, which is the root mean square of the deviation. There is a vast number of other testing scales depending on your specific requirements. A more advanced surface roughness tester may offer more testing scale options.

After the test, the data collection system is processed with digital filtering and parameter calculation system via a DSP chip and the measuring result can be read on LCD screen or simply printed through printer and communicated with PC.

Optional Sensors

NG-SR55	**Extension rod. Used to extend length of sensor when testing deep hole (55mm)** 
NG-SR90	**Right angle measuring mechanism.** 
NG-SR100	**Standard sensor, plane & shaft & inner surface of hole>6mm, depth <22mm** 
NG-SR120	**Small hole sensor, cylindrical& plane &inner surface of hole>2 mm, depth <9mm** 
NG-SR110	**Sensor for curved surface & plane, cylindrical, curvature radius>3 mm** 

NG-SR131	**Sensor for deep groove, cylindrical & plane & groove width>3 mm, depth<10mm** 
NR-S520	**Metal Working Platform** **Designed for elevating, and stability during the testing procedure** 
NG-SR620	**Marble Substrate Working Platform, elevating, V groove, high accuracy to test tiny work piece.** 
NR-SRB-GEN	**Roughness comparison block** **High quality comparison block of surface roughness with anti-rust treatment.** **30 comparison block/set** 

Technical Specifications

Other Testing Systems Available Upon Request ***

NG-SR400T			
Measuring rang	The Z axis (vertical)	320μm (-160μm-160μm), 12600μin (-6300μin-+6300μin)	
	The X axis (Transverse)	17.5mm (0.69 inch)	
Resolution	the Z axis (vertical)	0.002μm/±20μm	0.004μm/±40μm
		0.008μm/±80μm	0.02μm/±160μm
Display	Parameter	Ra Rz, Rq Rt, Rc Rp Rv R3z R3y Rz(JIS) Ry Rs Rsk Rku Rmax Rsm Rmr RPc Rk Rpk Rvk Mr1 Mr2	
	Assessed Graphic	Rmr curve, Roughness curve, Primary Profile, Filter waveform	
Standard		ISO4287, ANSI b46.1, DIN4768, JISb601	
Filter		RC,PC-RC,Gauss,D-P	
Cut off length(lr)		0.25,0.8,2.5mm	
Assessment length (ln)		Ln= lr×n n=1-5	
Sensor	Measuring principle	Differential Inductance	
	Stylus tip	Diamond, 90°/ cone angle/5μmR	
	Force	Measuring force<4mN, Skid force<400mN	
	Guide parts	hard alloy, skid radius of curvature: 40mm	
	Measuring speed	lr=0.25, Vt=0.135mm/s lr=0.8, Vt=0. 5mm/s	
Accurate to		0.001μm	
Tolerance		±(5nm+0.1A) A=Ra standard value of precise specimen	
Repeatability		≤3%	
Residual Profile		≤ 0.010μm	
Power supply		Built-in Lithium ion battery 3600mAh	
Main unit dimension		155×145×58mm	

NG-SR400T	
Drive unit dimension	23×27×115mm
Zoom of height adapter	40mm
Weight	Around 1000g
Working Environment	Temperature: - 20°C ~ 40°C Humidity: < 90% RH
Store and Transportation	Temperature: - 20°C ~ 40°C Humidity: < 90% RH
Standard sensor	Groove sensor
Optional accessory	Magnetic stand, height gauge and related adapter, curved sensor, small hole sensor, deep groove sensor, very small hole sensor, Extending Rod, Right Angle Rod, mini printer, 200mm platform, 300mm marble platform, software, mobile APP

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