



Surface Roughness Tester

Video: <https://youtu.be/msofu6XrzBY>

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 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





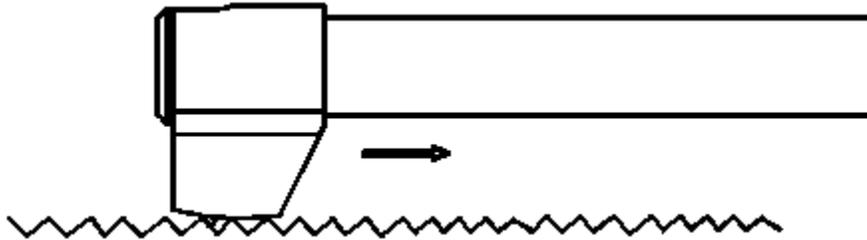
Features SR200-T & NG-SR300-T Systems:

- ✓ 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 with stylish and compact design, with extreme high reliability.
- ✓ Bluetooth function
- ✓ APP data acquisition and management option





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.

Technical Specifications NG-SR400-T:

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 R _{PC} 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	Ir=0.25, Vt=0.135mm/s Ir=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	
Drive unit dimension	23×27×115mm	
Zoom of height adapter	40mm	
Weight	Around 1000g	
Working Environment	Temperature: - 20□ ~ 40□ Humidity: < 90% RH	
Store and Transportation	Temperature: - 20□ ~ 40□ 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	

Optional Stylus:

NG-SR55	Extension rod. Used to extend length of sensor when
	
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	

Optional Test Stands and Accessories:

NR-S520 - Metal Working Platform

NG-SR620 – Marble Working Platform

NG-SRB-GEN – Roughness Calibrations





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