

SR100 Surface Roughness Tester

Starrett®

Easy-to-Use & Accurate

The SR100 portable surface roughness tester is powerful, accurate and easy to use.

With the SR100, you can measure roughness almost anywhere. It is ideal for checking large components, structures, auditing batch production prior to shipment and production line process control.

Separates into Two Pieces

The innovative SR100 separates into two pieces to measure surface roughness.

The bottom half of the SR100 contains the traverse mechanism and stylus pickup assembly which is placed on the surface to be measured. Its wide base ensures stability.

The upper half includes a large LCD display, start button, mode and parameter buttons, comfortably hand-held for easy operation and clear viewing.

How it Works

A diamond stylus is drawn across the part. The motorized traverse mechanism is cam driven to ensure that the correct horizontal distance is traveled.

Vertical movement of the stylus as it travels across peaks and valleys is detected by a piezo-electric pickup which converts the mechanical movement of the stylus into an electric signal.

The electrical signal is digitized and sent to a microprocessor where the parameters are calculated using standardized algorithms.



SR100 uses an infra-red (IrDA) link between the upper and lower units to provide remote, cable free operation up to a distance of 40" (one meter).

Features

- Large LCD window
- Measures Ra at the touch of a button
- In addition to basic roughness parameters Ra and Rz, also measures advanced Rp, Rv and Rt parameters
- Five second cycle time
- Result saved until the next measurement is taken
- Switches between inch and metric mode without remeasuring
- Use right out of the box – little or no operator training required
- Automatic shut-off after five minutes of inactivity
- Configured with the most common industrial settings to ensure correlation between multiple operators (see specifications)
- Simple and reliable calibration routine
- Uses standard off-the-shelf calculator type batteries with a minimum life of 5,000 measurements
- Includes SR100 two-piece assembly, calibration standard, batteries, operation guide and a carrying case



SR100 Surface Roughness Tester

Starrett®

Technical Specifications

Gauge range	0.008" / 200µm
Accuracy	5% of reading + 4µin / + 0.1µm
Pick up type	Piezoelectric
Gauge force	.007 oz. / 200mg
Stylus	Diamond, Radius 200µin / 5µm
Cut off value	0.03" / 0.8mm ±15%
Filter	2CR
Traverse length	0.2" / 5mm
Traverse speed	0.08"/sec, 2mm/sec
Display units	µin / µm
Battery life	5,000 operations minimum

Parameter results

Ra, Rz, Rv, Rp, Rt

Parameters	Range	Resolution
Ra:	1600µin / 40µm	0.4µin / 0.01µm
Rz, Rv, Rp, Rt:	7800µin / 199µm	4µin / 0.1µm

Dimensions

Overall dimensions	4.92 x 3.15x 1.5" / 125 x 80 x 38mm
Weight	7oz / 200gm

Component dimensions and condition

Min bore	2.6" / 65mm
Min diameter	1.0" / 25mm
Max temperature	95°F / 35°C

Nominal operating conditions

Temperature	68°F / 20°C
Humidity	0 to 80% non condensing

Storage conditions

Temperature	32°F to 122°F / 0 to 50°C
Humidity	0 to 80% non condensing



SR100 Surface Roughness Tester & Accessories

Cat. No.	EDP	
SR100	20950	SR100 two-piece surface roughness tester assembly, calibration standard, batteries, operation guide and a carrying case