

SR200 Surface Roughness Tester

Powerful, Flexible & Accurate

The SR200 is a full featured, powerful and versatile surface roughness tester. It can be used either freestanding (on horizontal, vertical or even inverted surfaces) or bench mounted with fixturing for batch measurement and laboratory applications. It is battery powered for portability, with an AC adapter available.

Fast & Flexible

The SR200 can calculate as many as ten parameters (below) covering a comprehensive range of requirements. Its electronics provide very fast analysis – results are calculated and displayed even before the traverse unit returns. This fast processing, combined with intuitive menu buttons ensures measurement cycle productivity.

Large Display & Intuitive Operation

The SR200 has a large LCD to display a full menu and all measurement results – scroll through the menus with the two control buttons, make your selections, then press the MEASURE key. All selections are saved for future measurements with a built-in memory capacity that holds up to 100 readings. The SR200 includes an RS232 port so all measurement criteria and results can be exported.

Measurement Parameters*

Amplitude Parameters (measures vertical characteristics of surface deviations):

R_a (Arithmetic Mean Deviation)
R_{sk} (Skewness)
R_z (Average peak to valley height)
R_t (Total height of profile)
R_p (Max profile peak height)
R_{z1max} (Max peak to valley height)

Spacing Parameters (measures horizontal characteristics of surface deviations):

R_{pc} (Peak count)
R_{sm} (Mean width of profile elements)

Hybrid Parameters (combinations of spacing and amplitude parameters):

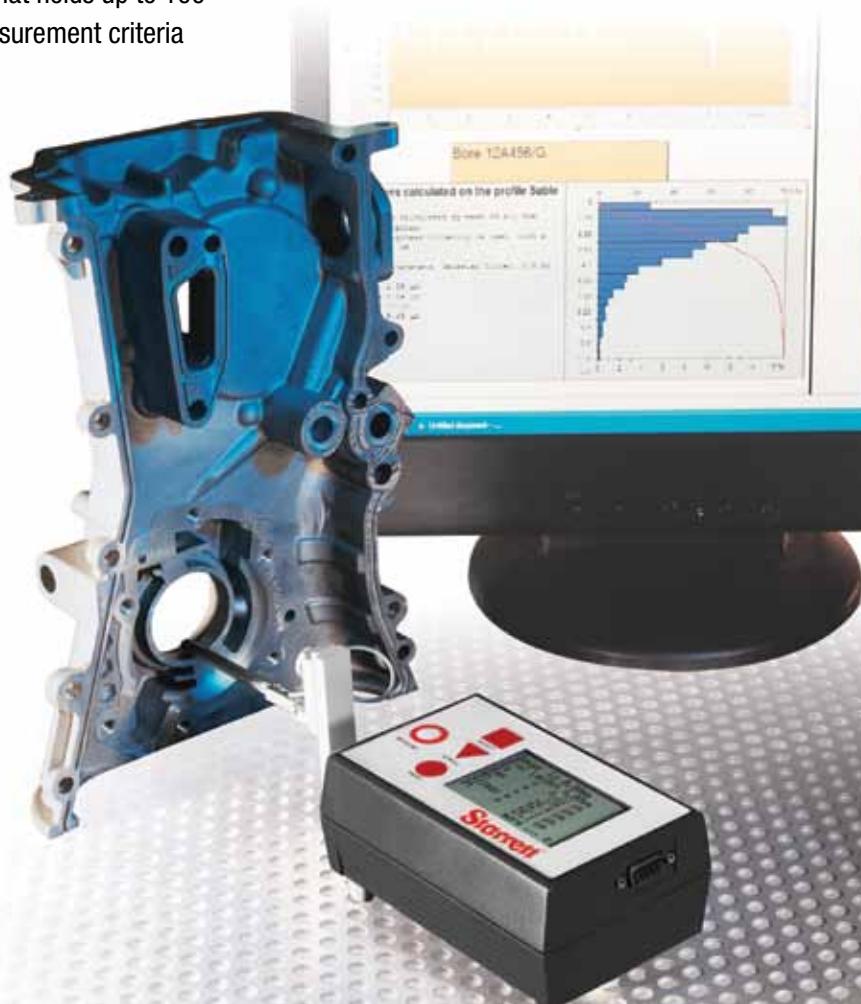
R_{mr} (Material ratio)
R_{da} R_{Δa} (Arithmetic mean slope)

* and many others with included software



Overview

- Large screen display
- Unique stylus lift mechanism for total flexibility
- Many application specific parameter options
- Comprehensive selection optional accessories and pickups
- Long traverse length and extended pickup reach
- TalyProfile Lite Windows software included with available Silver and Gold upgrade options
- Stores of up to 100 readings



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Unique Stylus Lift Mechanism

The SR200 has a uniquely engineered stylus lift mechanism which allows a vertical adjustment of 2" / 50mm and rotation of the pickup to different measuring positions, including right angle or inverted measurements. These adjustments to the height and position of the gauge allow areas and features of a part to be easily measured without additional complex fixturing. This feature saves the operator a huge amount of set up time and allows total flexibility. Typical applications where the stylus lift is invaluable include the measurement of steps, bores, grooves and lands.

Built-in Memory/Storage

The SR200 is truly portable with no PC or printer cables in the way of measurements – take it to wherever you need to take measurements, save up to 100 batch readings and then download to your PC or printer at your convenience.

Long Traverse Length and Extended Pickup Reach

The SR200 can traverse up to 1" / 25mm (or as little as 0.010" / 0.25mm) depending on your component. In addition, the stylus length and pick-up configuration give a long reach, making it an ideal instrument for features such as large and narrow bores.

Comprehensive Range of Accessories & Pickups

An extensive range of pickups and accessories are available to suit the varied measurement needs of our customers.



TalyProfile Lite Software Included with the SR200

The SR200 includes TalyProfile Lite, Windows software with powerful analysis features.

After receiving data from the SR200, TalyProfile Lite can immediately analyze, print, export as a .txt or .csv file, or save it as a document that can be reopened and used as a template for future measurements.

Outstanding Graphics

TalyProfile Lite provides clear on screen profile images. Users can take basic measurements and create a full report using the software's detailed analysis options and publishing capabilities.

In-Depth Analysis

Profiles can be levelled and zoomed to remove unwanted features or defects from the analysis. Distance measurement between features and areas of a profile, step height, area of a hole and peak can all be easily displayed, graphically and numerically.

Time-saving Templates

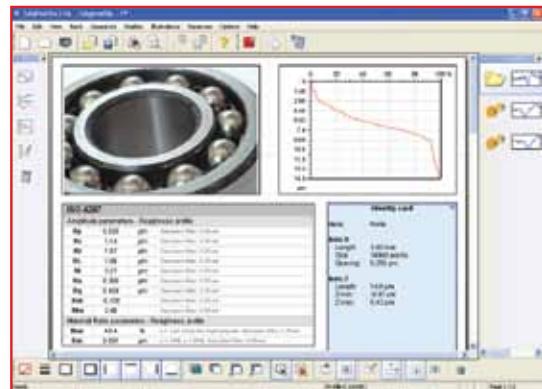
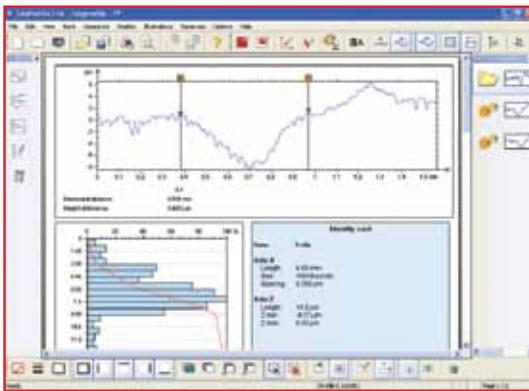
A sequence of analysis functions can be saved as a "template" and applied to future measurements, turning detailed reporting tasks into routine documents.

Presentation

TalyProfile Lite includes professional presentation capabilities. Graphs, profiles and results can be arranged and printed within TalyProfile and also has the flexibility for export to other presentation software.

Easy Upgrade Path

TalyProfile Lite provides an easy upgrade path to the more advanced Silver and Gold versions. TalyProfile Silver has all functions typically used for shopfloor inspection. TalyProfile Gold includes complete laboratory analysis functions.

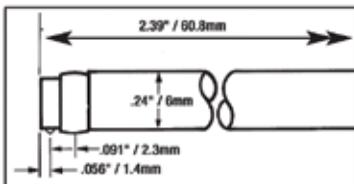


TalyProfile Features	Lite	Silver	Gold
Acquisition interface	X	X	X
Multiple file format reports	X	X	X
Graphical display	X	X	X
Desktop publishing templates	X	X	X
Document page viewer	X	X	X
Levelling	X	X	X
Symmetries	X	X	X
Zoom	X	X	X
Distance measurement	X	X	X
Profile curves	X	X	X
Area of a hole / peak	X	X	X
Abbott-Firestone Curve	X	X	X
Mini Documents		X	X
Save Profile (export data)		X	X
Basic & 2D file formats		X	X
Tolerance limits		X	X
Join Two Profiles			X
Resampling			X
Form removal			X
Retouch profile points			X
Filtering by FFT			X
Fractal analysis			X
R & W Motifs (ISO 12085)			X
Rk Calculation of Profiles			X
Graphical RK Parameters			X
Step height measurement			X
Frequency spectrum			X
Morphological Envelopes			X
Thresholding			X
Power spectrum density			X

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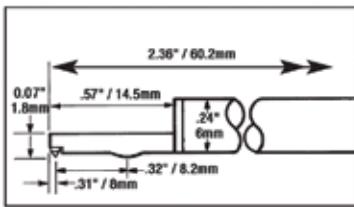
Pickups

An extensive range of pick-ups are available to meet a variety of measurement requirements.



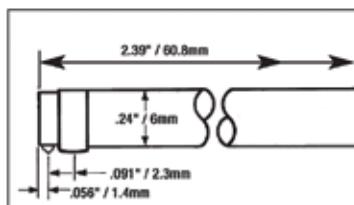
Standard Pickup

For general surface roughness measurement.
Cat. No. SR-112-1502
EDP 20956



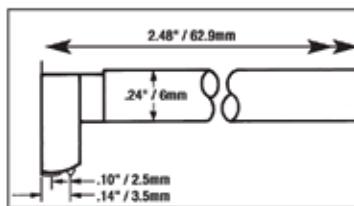
Small Bore Pickup

For general use in small bores, grooves and on narrow surfaces.
Cat. No. SR-112-1504
EDP 20958



Right Angle Pickup

For measurement at right angles to the direction of traverse.
Cat. No. SR-112-1505
EDP 20959



Recess Pickup

For recesses to a depth of .023" / 5.7mm
Cat. No. SR-112-1506
EDP 20960

Technical Specifications

Pickup

Gauge range	0.012 μ " / 300 μ m
Resolution	0.04 μ /0.01 μ m
Accuracy	2% of reading + LSD μ m
Pickup type	Inductive
Gauge force	.005-.01 oz. / 150-300mg
Diamond stylus	Tip radius 200 μ " / 5 μ m unless otherwise specified

Instrument

Cut off value	0.01, 0.03, 0.3" / 0.25, 0.8, 2.5, 8mm
Filter	2CR or gaussian (selectable)
Traverse length	0.01-0.98" / 0.25-25mm
Traverse speed	0.04"/sec, 1mm/sec
Display units	μ m / μ in
Data output	RS232
Power	9V battery or (optional) power supply

Parameters

Ra, Rz, Rt, Rp, Rmr, Rpc, Rsm, Rz1max, Rsk, Rda

Storage Capacity

100 measurement results

Dimensions

Overall dimensions	5 x 3.35 x 2.4" / 127 x 85 x 60mm
Weight	1lb / 450gm

Nominal operating conditions

Temperature	41-104°F / 5-40°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

SR200 mounted to SR-112-2963 Column and Stand



SR200 Surface Roughness Tester & Accessories

Cat. No.	EDP	Description
SR200	20951	SR200 display and traverse unit, TalyProfile Lite software, pickup and diamond stylus, calibration standard, manual and carrying case
SR-112-1510	20961	7.875" / 200mm Extension Rod with Lead
SR-112-1534	20962	Reference Standard
SR-112-1517	20963	Support Stand
SR-112-2693	20964	Column and Stand
SR-112-1502	20956	Standard Pickup with 200 μ " / 5 μ m Stylus
SR-112-1503	20957	Standard Pickup with 400 μ " / 10 μ m Stylus
SR-112-1504	20958	Small Bore Pickup
SR-112-1505	20959	Right Angle Pickup
SR-112-1506	20960	Recess Pickup
SR-112-3680	20952	TalyProfile Gold - 2D Analysis Software w/cable
SR-112-3681	20953	TalyProfile Silver - 2D Analysis Software w/cable
SR-K509-1578	20954	TalyProfile 8'/2.5m Cable
SR-K509-1820	20955	TalyProfile 5'/1.5m Cable
SR-112-3530	20965	Power Adapter UK
SR-112-3531	20966	Power Adapter 110 Volt US
SR-112-3532	20967	Power Adapter 230 Volt EURO

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