Elcometer 7061 MarSurf PS1 Surface Roughness Tester

The Elcometer 7061 is a light weight and portable measuring solution for the range of surface roughness measurements required for compliance to International Standards.

The unit is also suitable for assessing surface roughness conditions in a wide range of general industrial applications; particularly where the sample is too large to bring to the laboratory.

Measurements of Surface Roughness are expressed in terms of Ra, Rz or Rt.

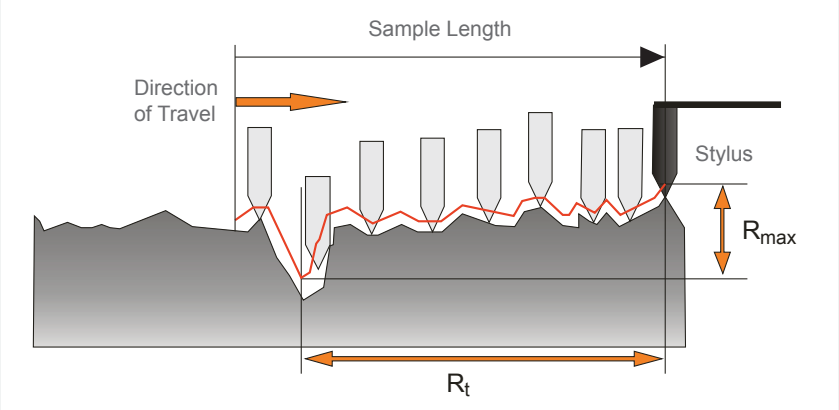
These values include peak-to-valley profile measurement in combination with an assessment of the frequency of peaks within the sample area.

- Multilingual Display
- Integrated Calibration Standard

STANDARDS:
ASTM D7127, ASME B46, DIN 4768, EN 10049, ISO 4287, ISO 4287/1, JIS B 0601, SSPC PA 17

How to use a Surface Roughness Tester

Surface Roughness Testers consist of a stylus which is mechanically drawn across the surface recording an "image" of the surface roughness across a pre-defined sample length.



The measurement technique provides a number of measurement parameters including:

- **Rmax:** The greatest distance between the highest peak and lowest valley over the sampling length
- **Ra:** The average roughness over the sampling length
- **Rt:** The distance between the highest peak and the lowest valley within any given sampling length.
- **Rz:** The average distance between the highest peak and lowest valley over a number of sampling lengths

Technical Specification

Part Number	Description	Certifcate
K7061M001	Elcometer 7061 MarSurf PS1 Surface Roughness Tester	●
Unit of Measurement	Metric, Imperial	
Stylus pick-up*	Inductive skidded stylus pick-up, 2µm (80µin) stylus tip, measuring force approx. 0.7 mN	
Parameters	Ra, Rq, Rz equiv. to Ry (JIS), Rz (JIS), Rmax, Rp, Rp (ASME), Rpm (ASME), Rpk, Rk, Rvk, Mr1, Mr2, A1, A2, Vo, Rt, R3z, RPc, Rmr equiv. to Tp (JIS, ASME), RSm, R, Ar, Rx	
Measuring Range	0-350µm (0-13.78mils) Resolution 8nm-32nm (0.315-1.260µin)	
Filter	Phase-correct profile filter (Gaussian filter) according to DIN EN ISO 11562, special filter according to DIN EN ISO 13565-1, ls filter according to DIN EN ISO 3274 (can be disabled)	
Cutoff (lc)	0.25mm, 0.8mm, 2.5mm; automatic (0.010”, 0.030”, 0.100”)	
Traversing Length(Lt)	1.75mm, 5.6mm, 17.5mm; automatic (0.069”, 0.22”, 0.69”)	
Traversing Length(acc. to MOTIF)	1mm, 2mm, 4mm, 8mm, 12mm, 16mm (0.040”, 0.080”, 0.160”, 0.320”, 0.480”, 0.640”)	
Evaluation Length (ln)	1.25mm, 4.0mm, 12.50mm (0.050”, 0.15”, 0.50”)	
Number (n) of Sampling Lengths	Selectable: 1 to 5 sampling lengths	
Memory Capacity	Max. 15 profiles, max. 20,000 results	
Battery	Rechargeable battery 100V to 264V power supply	
Dimensions	140mm × 50mm × 70mm (5.51” × 1.97” × 2.76”) Weight 400g (0.88lbs)	
Packing List	Elcometer 7061 MarSurf PS1 base unit, drive unit, 1 x standard stylus pick-up, built-in battery, roughness standard integrated into casing, height adjustment accessory, stylus pick-up protection, universal charger / mains adapter, USB cable, carry case with shoulder strap and belt loop, calibration certificate and operating instructions	

● Calibration Certificate supplied as standard.

* Other stylus pick-ups are available

Accessories

Part Number	Description
KT007061P001	**Stylus pick-up Extension; 80mm (3.15”)**, ideal for measuring points located deep within cylinders
KT007061P002	**Stylus pick-up PHT 3-350**, for measurements in bores from 3mm (0.12”) diameter
KT007061P003	**Stylus pick-up PHT 11-100,** for measurements at recessed measuring points, e.g. in grooves from 2.5mm (0.10”) wide and up to 7.5mm (0.30”) deep
KT007061P004	**Stylus pick-up PHTR 100,** for measurements on concave and convex surfaces
KT007061P005	**Stylus pick-up PHTF 0.5-100**, for measurements on tooth flanks
KT007061P006	**Stylus pick-up PT 150**, Dual-skid stylus pick-up for measurements on metal sheets and roller surfaces according to DIN EN 10049 (SEP)
KT007061P007	**Stylus pick-up PHT 6-350**
KT007061P008	**Stylus pick-up PHT 6-350, 5µm Probe Tip**, for measurements on flat planes, in bores from 6mm (0.24”), 17mm (0.67”) deep and in grooves from 3mm (0.12”) wide
KT007061P010	Measuring Stand ST-D
KT007061P012	Measuring Stand Mount - Required to fix the Elcometer 7061 to the measuring stand
KT007061P011	End Face Vee-Block - For measuring on flat faces of cylindrical and planar components
KT007061P013	Adaptor Set for Transverse Tracing; Comprising of Adaptor for Transverse Tracing and Vee-Block Holder with Vee-Block - For hand-held transverse tracing of cylindrical measuring objects
KT007061P016	**MarSurf PS1 Explorer Evaluation Software** Available as an optional accessory PS1 Explorer Evaluation Software allows the Elcometer 7061 to be connected to a PC or laptop; using the USB cable supplied to document protocol profiles, results, statistics and to print out all your measurement results.

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