

Profilometer PCE-RT 2000



PCE-RT 2000 Profilometer

Portable Roughness Tester for fast roughness detection / Large OLED display / Measurement of Ra, Rq, Rsm, Rsk, Rz, Rt, Rp, Rv, Rc / Numeric and graphic display

The profilometer PCE-RT 2000 is used for accurate measurement of surface roughness. The profilometer can be used on all surfaces. The roughness with the profilometer is precisely recorded via the piezotast head. The profilometer measures in the ranges Ra, Rq, Rsm, Rsk, Rz, Rt, Rp, Rv, Rc and is therefore a universal profilometer in quality assurance.

The profilometer is simply placed on the surface for measurement. During the measurement process, a probe is pulled over the surface and the profilometer displays the measured value on the large, OLED display. In addition to the numerical measured value display, the measuring profile can be graphically visualized. The profilometer PCE-RT 2000 is powered by a rechargeable battery. The charger of the profilometer is included in delivery. The profilometer has an automatic shut-off function for the battery care.

The profilometer PCE-RT 2000 has a Micro USB cable. The measuring device can be charged via this connection. Furthermore, the measurement data can be transmitted from the profilometer to the software. So it is possible to create a complete documentation of the measurement.

Rz = average roughness

The average roughness depth Rz is the arithmetic mean of the largest single-order depths of several adjacent individual measurement sections.

Ra = arithmetic mean roughness

Ra is the generally recognized and internationally applied roughness parameter. It is the arithmetic mean of the absolute values of the profile deviations within the reference distance. The measured value Ra is always smaller than the Rz value determined on the same roughness profile.

Rt = maximum roughness

The maximum surface roughness Rt is the distance between the highest and the lowest point of the measuring section.

Rq = Square Mean Roughness

Rq is the root mean square of all ordinate values within the individual measurement distance I. Rq corresponds to the designation RMS (Root Mean Square).

Subject to change



- ▶ OLED display
- ▶ Measures Ra, Rq, Rsm, Rsk, Rz, Rt, Rp, Rv, Rc
- ▶ Numerical and graphical display of measured values
- ▶ Micro USB cable
- ▶ 3 different cutoff wavelengths
- ▶ PC software
- ► Statistical functions
- ▶ Battery operation

Specifications

Measurement parameters Ra, Rq, Rsm, Rsk, Rz, Rt, Rp, Rv, Rc Measuring ranges Ra, Rq, Rc: 0.005 μ m ... 16 μ m Rz, Rt, Rp, Rv: 0.02 μ m ... 200 μ m

Rsm: 5 μm ... 1000 μm

Rsk: -1 ... 1

4 mN (0.4 gf)

Radius stylus tip $5 \mu m$

Material stylus tip Diamond, 90° angled

Max. Recommended force for static

measurement

Measuring principle Inductive
Radius longitudinal guide bar 45 mm / 1.8 in

ANSIB46.1/ASMEB46.1 (DIN EN ISO

4287)

Maximum driving distance 15 mm / 0.6 in

Cut-off wavelength (cut off) 0.135 mm / s at cut-off wavelength:

0.25 mm

0.5 mm / s at cut-off wavelength: 0.8

 mm

1 mm / s at cut-off wavelength: 2.5

mm

Reversing speed: 1 mm / s

Measurement accuracy <± 10%
Repeatability <6%
Display OLED

Units µm / µinch (switchable)

Interface Micro USB

Power supply Rechargeable Li-ion battery

More information



Software Manual

More product info



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