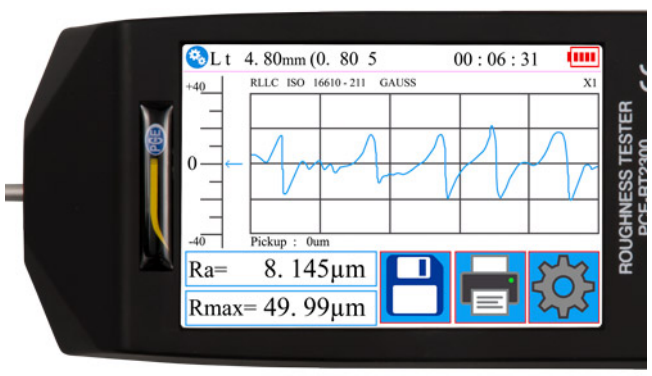
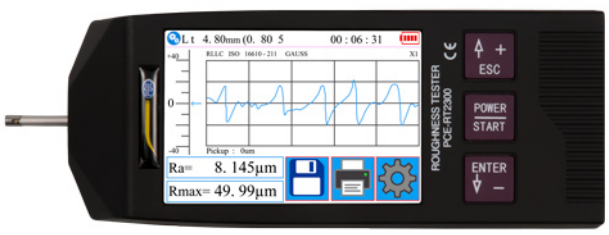
# Material Tester PCE-RT 2300-ICA Incl. ISO Calibration Certificate




**Material tester PCE-RT 2300-ICA incl. ISO calibration certificate**
**Portable material tester for the rapid detection of roughness (Ra, Rz, Rq, Rt and many more) / Detachable motor unit / Touch screen Interface / Range of 320 µm or 12.6 mil**

The material tester PCE-RT 2300 is used to measure the roughness of surfaces. The PCE-RT 2300 roughness meter has a removable motorized sensor. This property makes it possible to determine the surface roughness with the roughness measuring device even on small or narrow profiles. The measured values are displayed on a large LCD display of the roughness meter. This display is also used by the material tester. The material tester is powered by an internal battery with voltage. This battery can be powered by a conventional USB power adapter.

The detachable motorized sensor is connected by a cable to the main unit of the roughness gauge. The diamond stylus is installed in the motorized sensor. This presses with a maximum force of 4 mN on the surface from which the roughness is to be measured. The material tester measures according to the valid ISO, ANSI and JIS standards for roughness measuring instruments.

**Worth knowing about the roughness measuring device**:
**Rz = average roughness**
The mean roughness depth Rz is the arithmetic mean of the largest individual seam depths of several adjoining individual measuring 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 line. 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 l. Rq corresponds to the designation RMS (Root Mean Square).

- Touchscreen and connectivity to PC
- Measurement of all roughness values
- Battery and mains operation
- Different filters adjustable
- Diamond test head
- Removable motorized sensor
- Large measuring range:  Rz: 0.02 µm ... 320 µm; Ra, Rq: 0.005 µm ... 32 µm
- **Incl. ISO calibration certificate**

Subject to change

# Specifications

| | |
|---|---|
| Measuring range | Rz: 0.02 µm ... 320 µm; Ra, Rq: 0.005 µm ... 32 µm |
| Accuracy | ± 10% |
| Repeatability | ± 6% |
| Resolution | ± 20 µm: 0.01 µm<br>± 40 µm: 0.02 µm<br>± 80 µm: 0.04 µm |
| Measurement Parameters | Ra, Rz, Rq, Rt, Rc, Rp, Rv, R3z, R3y, Rz (JIS), Ry, Rs, Rsk, Rku, Rmax, Rsm, Rmr, RPc, Rk, Rpk, Rvk, Mr1, Mr2 |
| Measurement Standards | ISO4287, ANSI b46.1, DIN4768, JISb601 |
| Graphic | Primary profile (roughness + waviness)<br>Roughness profile (roughness)<br>Loading curves |
| Measuring filter | RC, PC-RC, Gaus, DP |
| Measuring section (Cut Off) | 0.25 mm, 0.8 mm, 2.5 mm |
| Measuring length | 1 ... 5* measuring path<br>Max. 17.5 mm (including pre- and post-run) |
| Sensor | Diamond probe tip 90°<br>5 µm |
| Contact force sensor | <4 mN |
| Feed rate | 0.25 mm: 0.135 mm / s<br>0.8 mm: 0.5 mm / s<br>2.5 mm: 1 mm / s |
| Display | 3.5" LCD screen |
| Power supply | 3.7V Li-Ion Battery<br>5V / 800-mA USB Power Adapter |
| Operating time | 50 h |
| Operating conditions | -20 ... 40°C / -4 ... 104°F, max. 90% rh |
| Storage conditions | -40 ... 60°C / -40 ... 140°F, max. 90% rh |
| Dimensions | Main unit: 158 x 55 x 52 mm / 6.2 x 2.2 x 2 in<br>Motor unit: 115 x 23 x 27 mm / 4.5 x 1 x 1.1 in |
| Weight | About 500 g / 1.1 lbs |

# More information

**Manual**

**More product info**

**Similar products**

Subject to change