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## Technical Ultrasonic Tester PCE-3000U

**UCI hardness tester PCE-3000U series Mobile UCI hardness tester / hardness scales HRC, HB and HV / NDT device for measuring tensile strength Rm suitable / for parts thickness starting at 1 mm**

The UCI hardness tester PCE-3000U can be used for quickly checking the hardness of components even after installation. The device offers a wide measurement range, easy handling, robust design and a temperature accuracy up to 40 ° C. In addition to the hardness in Rockwell, Brinell and Vickers, the UCI hardness tester can test the tensile strength of steels up to 1740 MPa. The UCI hardness tester comes standard with a UCI probe with a test force of 50N, with this probe can be measured independent of direction from all directions with no correction factor.

Another advantage of the hardness tester is its non-destructive test or NDT property. There is a Vickers diamond, which is excited in the ultrasonic frequency range at the probe tip. Touching the diamond to the specimen surface dampens the vibrations. The resulting frequency shift is directly related to the surface hardness of the test piece. Due to the low test loads, the penetration depth of the diamond is very low, which is why only an almost invisible impression remains.

The UCI hardness tester is therefore used for the control of small thin-walled components, for surface hardened specimens or nitrided components. The hardness tester has also been effective in the measurement of welds and control of components with complex geometry.

In addition to the UCI method measuring the PCE-3000U can be equipped with a rebound probe. This allows the UCI hardness tester to be enhanced with a Rebound hardness testers. So the users of hardness tester have two models to choose from, the PCE-3000U with UCI Hardness Tester and the PCE-3000UL, which has a UCI and rebound hardness probe in the kit.

- Non-destructive hardness testing
- different hardness scales
- 5 materials testable
- Battery operation
- USB interface
- different measuring probes can be connected

### Technical specification for UCI hardness tester PCE-3000U

Measuring Range	Rockwell 20 ... 70 HRC Brinell 90 ... 450 HB Vickers 230 ... 940 HV tensile strength 370 ... 1740 MPa
Measurement Accuracy	± 1.5% HRC ± 3% HB ± 3% HV
Maximum Materialrauhigkeit	10 N probe: 1.5 Ra 50 N probe: 2.5 Ra rebound probe: 3,2 Ra
Maximum Curvature Radius of the Surface	UCI probes: 5.0mm / 0.19 in rebound probe: 10 mm / 0.39 in
Minimum Weight of the Specimen	UCI probes: 0.1 Kg / 0.2 lbs rebound probe: 5 kg / 11 lbs
Minimum thickness of the test specimen	UCI probes: 1 mm / 0.03 in rebound probe: 10 mm / 0.3 in
Working Conditions	- 20 ... 40 ° C / -4 ... 104 ° F
Dimensions	Unit: 122 x 65 x 33 mm / 4.8 x 2.5 x 1.2 in UCI probe: Ø25 x 140 mm / 0.9 x 5.5 in rebound probe: Ø20 x 150 mm / 0.7 x 5.9 in
Weight	Device: 200g / 7.05 oz UCI probe: 250 g / 8.8 oz rebound probe: 100 g / 3.5 oz
Power Supply	2 x 1.5 V battery
Battery Life	20 h

### Delivery UCI hardness tester PCE-3000U

- 1 x UCI hardness tester PCE-3000U
- 1 x 50 N UCI probe
- 2 x 1.5 V NiMH battery
- 1 x Charger
- 1 x Manual
- 1 x USB cable
- 1 x Software