

UCI T-U2 Lab

Hardness Tester



T-U2 works on **UCI** (Ultrasonic Contact Impedance) technology. Unlike the Leeb hardness tester, UCI hardness tester can also be used with small or thin-walled products, as well as parts of complex shape or with areas that need to be tested in hard-to-reach places.

UCI Hardness Tester T-U2 is the most optimal option in the world market for the **combination of price – quality.**

Innovation:

Do **hardness measurements**, **calibrate the device**, **set up** a convenient **display of values**, **save the results** of hardness measurements, **synchronize the archive** with your other devices and a PC, **transfer measurement results** to your colleagues – all this is available with your smartphone thanks to the special **NOVATEST app** for Android.

Hardness testers have never had such opportunities! Using a Bluetooth connection, your smartphone connects to the hardness tester and you have a completely new device – a new generation hardness tester! The **intuitive interface**, ample opportunities for **documenting results**, **Internet access**, **touch screen**, **camera**, **microphone** and **GPS receiver** of a smartphone turn your hardness tester into something completely unique and previously inaccessible.

With NOVATEST Lab App you are able:

- Setting and calibration of the hardness tester;
- Display of measurement results in real time in numerical form with the construction of a graph, histogram or statistics;
- Take a picture of the test object with the putting of hardness marks;
- Creation of a video of the controlled product;
- Recording audio notes for the tested object;
- Automatic saving of measurement geolocation on Google maps;
- Displaying a Google map with markers of places of measurements made on it and the ability to view these measurements;
- Displaying the calendar of measurements (presentation of the archive in the form of measurements grouped by date);
- Formation of the final comprehensive report on the measurement;
- Sending a finished report to e-mail, messenger (or in any convenient way) directly from the application;
- Flexible structure of the archive of measurements – completely similar to the usual explorer, with the ability to create folders and files with any names;
- Synchronization with PC and other smartphones;
- Cloud service for storing the archive of measurements;
- Automatic and manual synchronization of cloud measurement archives between devices;
- Launching the Google navigation mode, building a route and accompanying to the point at which the measurements were made
- The ability to store archives of other devices with Bluetooth in one application.

The main advantages of the UCI T-U2 are:

- **Thin-walled products measuring**

The uci hardness tester t-u2 can be used for samples from 1 mm

- **Measuring hardness of small products**

Using this device, the operator can, without additional fixation and accessories, carry out hardness testing of products weighing just 100g or even less.

- **Measuring hardness of complex shaped products**

The uci hardness tester t-u2 main purposes are products of complex shape (gear teeth, bearings etc.) And hard-to-reach places that need to be tested (grooves, radius surfaces, welds and heat affected zones etc.)

- **Minimal destruction**

The imprint after measuring with uci hardness tester is very small, the method is considered the most non-destructive of the known implemented in portable hardness testers. Also, the shallow penetration of the indenter makes it possible to measure the hardness of hardened layers, such as nitriding, cementation, etc.

- **Probes accessories**

The uci hardness tester t-u2 probe has a nozzle that helps the user to maintain the perpendicularity of the indenter penetration into flat surfaces, which significantly reduces the possibility of operator error. Also, using a special washer, the uci probe can be installed on radial surfaces, or it can be used without a nozzle at all to measure the hardness of small parts and grooves.

- **Shockproof protection**

The uci hardness tester t-u2 comes with a shockproof silicone case that prevents the device from malfunctioning when dropped from a height of up to several meters, which makes the device reliable and durable.

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UCI probe types

- 1kgf (10N) 2.2 lbf
- 5kgf (50N) 11lbf
- 10kgf (98N) 22lbf

• 98N (10 kgf)

Special type of probe with increased load. To carry out the measurement, it is necessary to apply a load of 10 kgf (set automatically by the converter). Low surface cleanliness requirements.

- Heat-treated and cemented parts with poorly prepared surface.
- Measurement on blades, on the inner surface of pipes, holes with high roughness.

• 50N (5 kgf)

The main type of probe for solving most hardness measurement tasks. To carry out the measurement, it is necessary to apply a load of 5 kgs (set automatically by the converter). Medium surface cleanliness requirements.

- Heat-treated and cemented parts, such as shafts, turbines, gears, teeth, welds, heat affected zones.
- Measurement in grooves, on teeth, in grooves, on radius surfaces.
- Measurement on the blades, on the inner surface of the pipes, holes.

• 10N (1 kg) Probe with reduced load – designed to measure the hardness of products with increased requirements for the size of the print (polished, polished surfaces), to measure the hardness of thin surface hardened layers. For the measurement, a load of 1 kgs must be applied. More demanding on surface cleanliness, compared with U1 (50N).

- Nitrided and cemented surface layers of molds, dies, thin-walled parts.
- Bearings, tooth flanks, saws.
- Hardness measurement of thin hardening coatings.
- Measurement on products after thorough machining.

UCI probe types		• 1kgf (10N) • 5kgf (50N) • 10kgf (98N)
Indenter		Diamond indenter (UCI)
Measurement hardness range		• Rockwell, HRC • Brinell, HB • Vickers, HV • Tensile strength, MPa • User calibrations
Hardness scale		UCI probe: HRC, HB, HV, MPa
Measurement accuracy		• HRC: 2HRC • HB: 10HB • HV: 15HV
Materials		• UCI probe – pre-calibrated for steel. • Additional custom scales and materials for calibration
Measuring direction	Any direction 360°	
Standards	ASTM A1038, ASTM E140, ISO 18265, DIN50159, GB/T 34205	
Connections	Wireless connection with Android gadgets via NOVATEST Lab App	
Storage capacity of measurement results	T-U2 Lab: 256 in the device + in NOVATEST Lab App limited only by the memory of the Android gadgets	
Languages	English, Spanish, Portuguese, French, Russian	
Dimensions	122x65x23 mm	
Operating temperature range	-20 a +40 °C	
Power	2pcs AA batteries	
Batteries life	not less than 20 h	
Weight of electronic unit with batteries	0,2 Kg	
Package gross weight	2 Kg	



Accessories:

Standard accessories:

- Hardness tester;
- UCI probe (10N, 50N or 98N for choice);
- 2pcs AA batteries;
- Charger;
- USB cable;
- Operating manual;
- Software for PC;
- Calibration certificate;
- Case.

Optional accessories:

- BAdditional UCI probes. Also, after the purchase if will be needed, user can order the additional Leeb probe (D, DC, DL, C, D+15, E, G), with activation code and will get combined hardness tester with two probes (UCI+Leeb);
- Batteries;
- Charger;
- Hardness test blocks;
- Portable grinding machine;
- Case for hardness tester.

