



NOVOTEST

UCI Hardness Tester NOVOTEST T-U2

Available with
Bluetooth



Datasheet

2022

1. Introduction

NOVOTEST T-U2 is the best price hardness tester in the world that works on UCI (Ultrasonic Contact Impedance) technology.

Unlike the Leeb hardness tester, such as the Leeb Hardness Tester NOVOTEST T-D2 and the Leeb Hardness Tester NOVOTEST T-D3, 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.

The device with wide functionality and high reliability is UCI Hardness Tester NOVOTEST T-U2. This is a device that has been manufactured by our company for more than 10 years, and has established itself as the most optimal option in the world market for the combination of price – quality.

1.1 Innovation! Optionally, the device can be equipped with a Bluetooth module!

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 NOVOTEST 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.

1.2 With NOVOTEST 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.

1.3 The main advantages of the UCI Hardness Tester NOVOTEST T-U2 are:

- *THIN-WALLED PRODUCTS MESURING*

The UCI Hardness Tester NOVOTEST T-U2 can be used for samples from 1 mm, and even less with special tool for thin sheets.

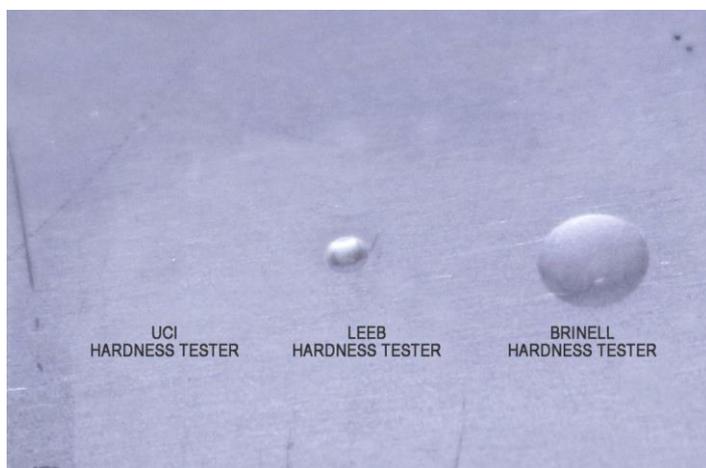


- *MEASURING HARDNESS OF SMALL PRODUCTS*

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 NOVOTEST 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.

- VARIOUS PROBE'S TYPES

The UCI Hardness Tester NOVOTEST T-U2 can be equipped with probes with different loads according to customer choice. Descriptions of possible options are presented in the table below:

<p>98N (10 kgf)</p>	<p>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.</p>	<ul style="list-style-type: none"> - Heat-treated and cemented parts with poorly prepared surface. - Measurement on blades, on the inner surface of pipes, holes with high roughness.
<p>50 N (5 kgf)</p>	<p>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 kgf (set automatically by the converter). Medium surface cleanliness requirements.</p>	<ul style="list-style-type: none"> - 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.
<p>10 N (1 kgf)</p>	<p>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 kgf must be applied. More demanding on surface cleanliness, compared with U1 (50N).</p>	<ul style="list-style-type: none"> - Nitrided and cemented surface layers of molds, dies, dies, thin-walled parts. - Bearings, tooth flanks, saws. - Hardness measurement of thin hardening coatings. - Measurement on products after thorough machining.

- PROBES ACCESSORIES

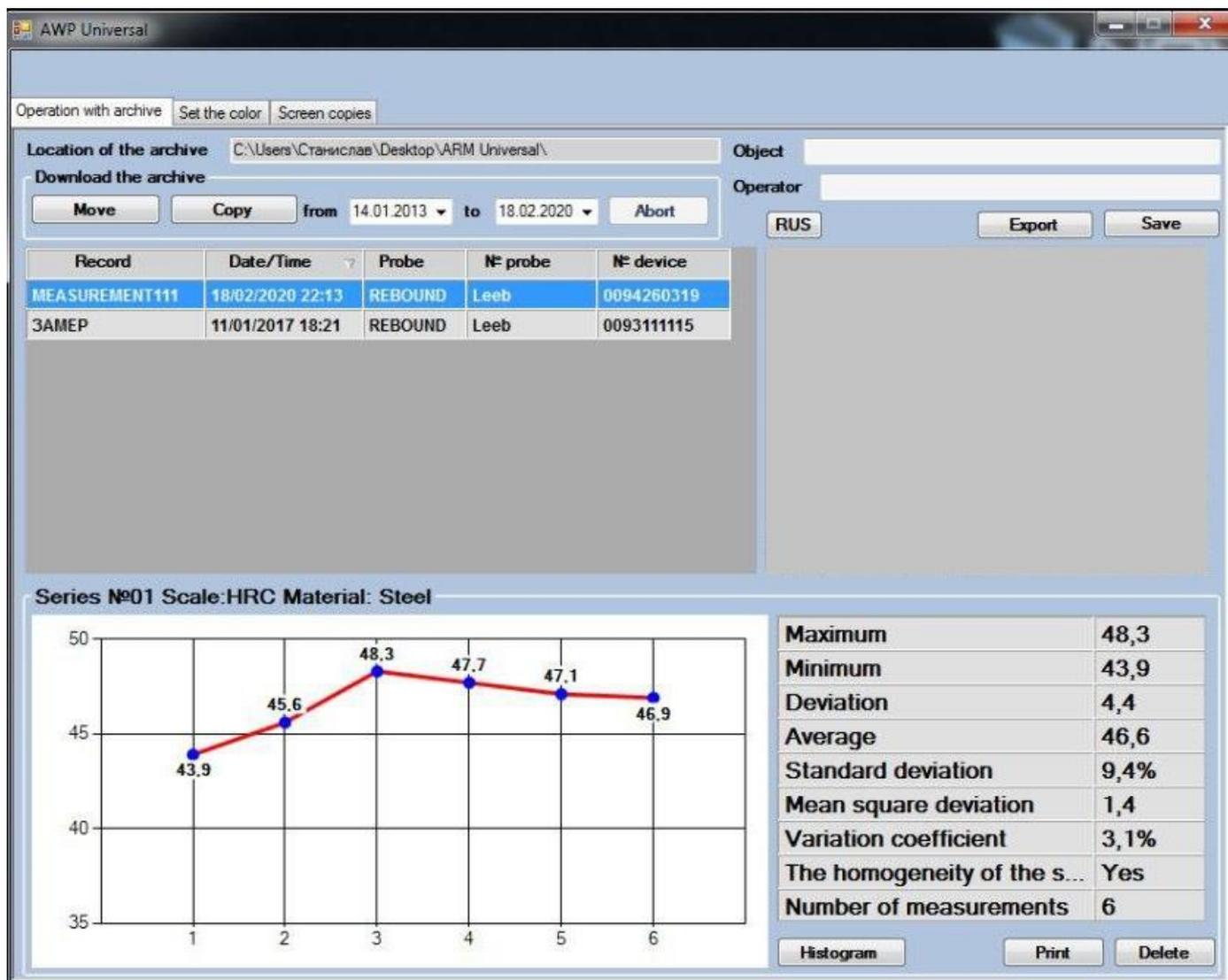
The UCI Hardness Tester NOVOTEST T-U2 probe has a nozzle that helps the user to maintain the perpendicularity of the indenter penetration into flat surfaces, which significantly reduces the possibility of operator error. Also, using a special washer, the UCI probe can be installed on radial surfaces, 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 NOVOTEST 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.

UCI Hardness Tester NOVOTEST T-U2 also comes with special software for operate with the device archive and subsequent data transfer for processing in convenient formats:



2. Specifications

2.1 Advantages

- Possibility of measuring the hardness value of products with any weights and thickness from 1 mm (small items, thin-walled structures, pipes, tanks, steel sheets, the products of complex shape, hardness control of metal coatings, etc.) and from 100g.
- Small imprint on the surface of the tested product (user can test mirror surfaces, necks shafts, knives, gear teeth, etc.)
- Hardness testing the hardening layer of the surface
- Wide range of hardness measuring
- Usability of measuring
- Minimum number of controls
- Extended temperature range (frost protected, operating temperature up to -20 °C)
- Device has internal memory and allows user to connect with PC
- Intuitive menu

2.2 Specifications

Range of hardness	20 – 70
– Rockwell, HRC	90 – 650
– Brinell, HB	230 – 940
– Vickers, HV	
Hardness scale	•UCI probe: HRC, HB, HV, MPa
Measurement accuracy:	•HRC: 2HRC •HB: 10HB •HV: 15HV
Standards	•ASTM A1038 •ASTM A956 •ASTM E140 •ISO 18265 •DIN50159 •GB/T 34205
Materials	•UCI probe – pre-calibrated for steel. •Additional custom scales and materials for calibration.
Storage of measurement results	256
Language	•English •Spanish •Portuguese •French •Russian *additional languages available by request
Dimensions, mm	122*65*23
Operating temperature range, ° C	-20 to +40
Power	2pcs AA batteries
Bateries life, hours, not less	20
Weight of electronic unit with batteries, no more, kg	0.2
Package gross weight, kg	2

2.3 Available options

- Additional UCI probes.
- Also, after the purchase 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).
- Stand for thin sheets
- Hardness test blocks
- Portable grinding machine

2.4 Standard package

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

