

T-UD3

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HARDNESS

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Graph

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MODE

BACK

HARDNESS Testing

ULTRASONIC Testing

COATING Testing

CONSTRUCTION Materials Testing

> MAGNETIC Testing





NOVOTEST is leading company of the manufacture devices and systems for non-destructive testing in Ukraine.

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ULTRASONIC

Today we are producing instruments for measuring a wide range of parameters and quality testing of the majority of products: hardness testers, coating testing gauges, ultrasonic flaw detectors, ultrasonic thickness gauges, magnetometers, instruments for testing the quality of construction materials, devices for environmental control and many others.

Our company has a powerful development center, each year we are introducing new devices. Also, due to our highly specialized staff, we can solve non-standard tasks, going to the solution with a nontrivial way of thinking.

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Hardness Testing

T-UD:

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Combined Hardness Tester NOVOTEST T-UD3

Unique device – the world's first hardness tester with photo-fixing of measurements which allows to bind the values of hardness to tested objects with indication of a specific place on the product!

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Hardness tester works as with the UCI so with the dynamic (Leeb) probes. User can get the advantages of the two methods of measurement – these are the maximum possibilities, which can be obtained from a portable device.

The device comes preconfigured for measuring the hardness of a wide range of materials – steel, alloyed steels, stainless steels, non-ferrous metals (aluminum, bronze, brass, copper), iron.



Sealed housing with rubber protecting shockproof linings makes the device perfectly suitable for work in the workshop and field conditions with high humidity, dust, etc. The hardness tester has a frost-resistant display that allows user to use the device at any time of the year in any climatic zone of the Earth.

The built-in camera allows making photographs of the testing object with subsequent imposition of the measured values of hardness on it in a real time. It implements the most reliable and clear method of logging of measurements.

Several modes of displaying information are implemented in the hardness tester, these modes substantially increase the usability of the device and designed for maximum reliable measurement of hardness:





NOVOTEST

The device comes with special

software to work on the PC with

the archive of measurements.

Graph – the mode of building the graph; Histogram – the mode of building the histogram; Statistic – the mode of statistics; Smart – the mode of filtering incorrect measurements;

Signal – the mode of displaying the signal (only for Leeb probe).

Combined Hardness Tester NOVOTEST T-UD3 can be equipped with a wireless printer for express-printing of the measurement protocol.

Hardness testers NOVOTEST are supplied in shockproof protective cases.

Hardness Testing

UCI Hardness Tester NOVOTEST T-U3

Ultrasonic contact-impedance (UCI) probe is used for measurement of hardness of small products, objects with a thin wall, complex shapes with thickness from 3 mm and weight over 0,1 kg, for measuring the hardness of hardened layers' surface.



UCI Hardness Tester NOVOTEST T-U3 uses ultrasonic contactimpedance method of measuring hardness standardized according to ASTM A1038.

The method allows making measurements very fast and easy: install the probe, load the spring for indentation the indenter with necessary force, read the hardness value on the device's display.

The using of diamond indenter allows setting the probe precisely in any tiny point. The depth of the imprint left by Hardness tester T-U3 is many times smaller than imprint left by standard Rockwell hardness tester, which makes this method of measuring the least destructive.

These advantages make Hardness tester T-U3 perfectly suitable for solving the following tasks: hardness measurements of products with complicated shape, fine-grained materials, heat-treated materials, thin layers and coatings, parts with surface hardening, thin-walled pipes, the small details, etc.

There are UCI probes with different loads: 10N, 50N, 98N for hardness testing of different surface finish products.



Leeb Hardness Tester NOVOTEST T-D3

Dynamic Leeb probe is used for measuring the hardness of non-ferrous metals, cast iron, materials with coarse-grained structure, solid products.

> Hardness tester NOVOTEST T-D3 uses dynamic method of hardness measurement – Leeb method, standardized according to **ASTM A596**.

> The method allows fast measurement of hardness: it is necessary to set the probe on the surface of the testing object, press the start button, read the hardness value of the device's display.

The method allows measurement of hardness of coarse materials (stainless steel, cast iron, etc.), products with ill-prepared surface, massive products – this method is perfectly complements the ultrasonic method for measuring hardness.

Hardness tester NOVOTEST T-D3 makes automatic calculation of hardness for a wide range of materials - steel, stainless steels, cast iron, bronze, aluminum, which allows calling this hardness tester one of the most universal, which does not require additional settings for the working with device.



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Hardness Testing

Combined Hardness Tester NOVOTEST T-UD2

Combined hardness tester of metals NOVOTEST T-UD2 is a multipurpose device of rapid non-destructive testing.

Hardness tester NOVOTEST T-UD2 is ideal for solving the following tasks:

- Testing of hardness of ferrous and non-ferrous metals;

- Testing of hardness of cast iron and various alloys;
- Determining the tensile strength of carbon steel products from pearlite class.



In the second series of hardness testers is possible to save results of the testing to the device's archive, and then transmit the results of hardness measurements to the PC. Also in this modification of hardness testers several modes of display are implemented, that essentially increases the usability of the device and designed for maximum reliable measurement of hardness:

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Statistic – the mode of statistics



Smart – the mode of filtering incorrect measurements

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Signal – the mode of displaying the signal (only for Leeb probe)

Shore Durometer NOVOTEST TS-A (analog) and Shore Durometer NOVOTEST TS-C (digital)

Shore Durometer is one of the classic devices for measuring the hardness of different materials in the workshop and laboratory.

Shore Durometer NOVOTEST standardized according to **ISO-7619** and **ISO-868**, **DIN53505**, **ASTM D2240** and **JIS K7215**.

Typical testing objects of Shore Durometer are: soft plastic, printed circuit boards, glass, elastomers, fibers, soft rubber, leather, resin, wax, butyl, silicone, vinyl.





UCI Hardness Tester NOVOTEST T-U2

BEST

FUNCTIONALITY

UCI Probe Test Stand NOVOTEST

It is the accessory unit for portable hardness testers, which is specially designed for UCI probe U1 of hardness testers NOVOTEST T-U2, T-U3, T-UD2, T-UD3.

UCI Probe Test Stand NOVOTEST is used for fixation of small, thin products during tests. It makes testing more accurate and more convenient for users.

Ultrasonic contact-impedance (UCI) probe is used for measuring the hardness of small products, objects with a thin wall, complex form, to measure the hardness of surface hardened layers.

Hardness tester NOVOTEST T-U2 uses ultrasonic contact-impedance method of measuring hardness standardized according to **ASTM A1038**.



Hardess Test Blocks

Hardness test blocks Rockwell (HRC), Brinell (HB), Vickers (HV) and Leeb (HLD) are designed for checking measurement accuracy and calibration of bench or portable hardness testers of metals.

Leeb Hardness Tester NOVOTEST T-D2

Dynamic Leeb probe is used for measuring the hardness of non-ferrous metals, cast iron, materials with coarse-grained structure, solid products.

Hardness tester NOVOTEST T-D2 uses dynamic method of hardness measurement – Leeb method, standardized according to **ASTM A596**.





Ultrasonic Testing



Ultrasonic Flaw Detector NOVOTEST UD2301

Ultrasonic Flaw Detector NOVOTEST UD2301 is designed for non-destructive testing of quality of metals, plastics, glass, composite materials, weld inspection and measuring the thickness of various products and constructions.



Flaw detector enables to detect defects such as discontinuities and heterogeneity of materials in semi-finished products, finished products and welded joints, measure the depth and the coordinates of defects depth, measure the thickness of the products, measure the velocity of propagation and attenuation of ultrasonic fluctuations in the material.

Ultrasonic Flaw Detector NOVOTEST UD2301 allows not only to carry out the testing for presence of internal defects, but also to measure the thickness of products with high accuracy.



Flaw detectors can be equipped with various ultrasonic and electromagnetic acoustic transducers.

Ultrasonic Flaw Detector NOVOTEST UD2301-mini

In contrast to standard type UD2301, Ultrasonic Flaw Detector NOVOTEST UD2301-mini is made in miniature housing, optimal in size for performing testing in tight spaces and in limited space. At the same time flaw detector equipped with a clear color display with high resolution 480x320 pixels, which significantly improves the usability of the device.



The flaw detector display can operate in any orientation – all 4 options, display rotation by 90 degrees allows user to configure the device at the left-handed and right-handed, the display can be used in portrait and landscape orientation.



Real-time B-scan mode



Distance-Amplitude Curves (DAC)





Distance-Gain-Size (DGS)

Various color themes

Ultrasonic Flaw Detector NOVOTEST UD2301-mini with color display and minimum dimensions are the best choice for expert ultrasonic testing. Powerful, lightweight and portable flaw detector in ergonomic shockproof housing with protective rubber treads – contemporary industrial design of flaw detector for general purpose. Device has such functions as: AFS, TVG, DAC, DGS, A-scan, B-scan, etc.

The flaw detector allows user to solve a wide range of tasks – from thickness measurements of thin products, to large-sized casting flaw detection.



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Ultrasonic Testing

Reference blocks

We produce standard reference blocks (V1, V2, etc.) according to ISO, DIN and other standards, which are used for calibration ultrasonic flaw detectors and UT-probes. Samples are made from low carbon fine-grained steel with a small damping coefficient.

Calibration Blocks

Calibration blocks are used to configure the sensitivity and duration of scan of ultrasonic flaw detectors during testing of various products (mainly flat sheets and pipes).

Custom made calibration blocks with notches (corner reflectors) are made of the same materials (steel, stainless steel, aluminum and others) as the tested objects, wherein the geometry (thickness and surface radius of standard sample) has the same characteristics as tested item.





Portable Ultrasonic Thickness Gauge NOVOTEST UT-1 is designed for rapid non-destructive testing of thickness of objects and constructions made of different materials.

- It is used for testing the thickness of:
- objects of various alloys and metals;
- objects of non-metallic materials composite, glass, plastic;
- hull parts, sheets, vessel walls;
- transportation and bridge design, including corrosion defects (scale, rust).



Standard samples of thickness

Thickness gauges can be equipped with various ultrasonic testing transducers and standard samples.

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Coating Testing

Bitumen And Mastic Insulation Adhesion Tester NOVOTEST CM-4219

Adhesion tester CM-4219 is a device for measuring the adhesion value of bitumen pipe insulation and other insulating coatings which are based on bitumen.

Tensile Adhesion Tester NOVOTEST AC-4624

Mechanical pull-off type adhesion tester is designed for measure the adhesion value of paints and other coatings on base and between layers or cohesive materials according to **EN13144** and **ISO 4624**, **ISO 16276-1**.

Peel Adhesion Tester NOVOTEST AP-4219

Adhesion tester AP-4219 is designed to measure the adhesive strength value of the coatings on different structures, as well as to determine the adhesion value of polymeric insulating tapes which are generally used for pipes insulation.

Cross Cut Adhesion Tester NOVOTEST AN-2409

Adhesion Multiblade Knife NOVOTEST AN-2409 is designed for adhesion testing by method cuts (parallel or lattice) with thickness range of paint coatings up to 200 µs, according to ISO 16276-2, ISO 2409, DIN 53151, ASTM B 335, ASTM D 3002, BS 3900-E6, BS EN ISO 2409, NF T 30-038, ASTM B 3359. Device can be used on flat and curved surfaces.

