

## Combined Hardness Tester NOVOTEST T-UD2

**High-precision, easy in operation and reliable with the most affordable price in the world among the analogues!**

- ✓ Two probes: UCI and Leeb
- ✓ Any restrictions for hardness testing
- ✓ Wide range of hardness value
- ✓ Ease in operation
- ✓ Minimum number of imprints
- ✓ Automatic recognition of probe
- ✓ Graphical display with backlight
- ✓ Control of the batteries
- ✓ New, intuitive menu with tips on the buttons
- ✓ Extended temperature range (cold-resistant, down to -20 °C)
- ✓ Internal memory and connection with PC
- ✓ Rubber protective housing-case



### **Description of Combined Hardness Tester NOVOTEST T-UD2:**

**Combined Hardness Tester NOVOTEST T-UD2 is designed for rapid non-destructive testing of hardness:**

- metals and alloys on standardized hardness scales;
- metals with different properties from steel (for example, non-ferrous metals, alloys, cast iron, etc.) with additional scales for calibration;
- use of the scale of tensile strength (Rm) for determining the tensile strength of carbon steel products pearlitic by automatically converting from the scale of hardness Brinell (HB).

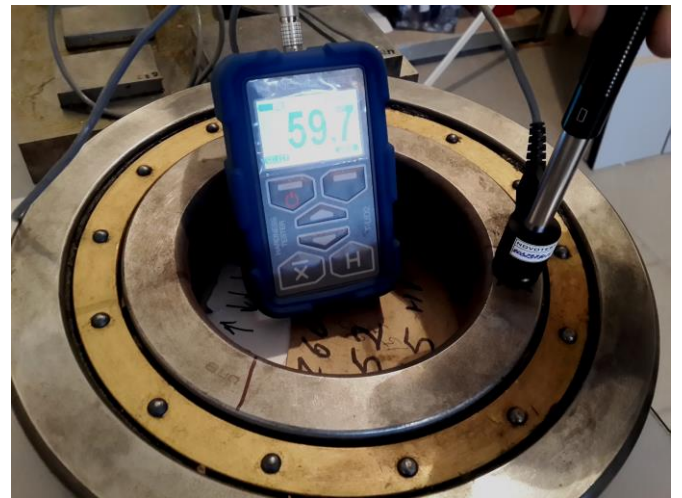
Implements methods for rebound and ultrasonic contact impedance (UCI). The combination of both methods allows test all metal products with thickness more than 1mm.



**Portable hardness tester T-UD2 very easy in operation, has the main functions with the lowest price in the world among the portable combined hardness testers!**

The device works with both ultrasonic contact impedance (UCI) and dynamic (Leeb) probes. User get the benefits of two methods of measurement - it is the maximum that can be obtained from a portable hardness tester.

Dynamic (**Leeb**) probe is used for measuring the hardness of non-ferrous metals, cast iron, coarse-grained materials, massive products etc.



The ultrasonic contact impedance (**UCI**) probe is used for measuring the hardness of small items, objects with a thin wall, complex form, and to measure the hardness of surface hardened layers.



Can be equipped with two types of UCI probes:

Load	Advantage or Benefit	Typical Applications
<b>50N (11.2lbf)</b>	Considered to be the Universal type for most general applications. 50N of downward hand pressure is required to activate the probe. Surface finish equivalent to 80 grind or better.	Induction or carburized machined parts, e.g.. camshafts, turbines, weld inspection, HAZ. Measurement in grooves, gear tooth flanks and roots Turbine blades, inside tubes with $\phi > 90\text{mm}$ .
<b>10N (2.2lbf)</b>	Load is easy to apply; provides control to test on a sharp radius. Only 10N of downward hand pressure is required to activate the probe. Surface finish equivalent to 150 grind or better.	Ion-nitrided stamping dies and molds, forms, presses, thin-walled parts Bearings, tooth flanks Turbine blades, inside tubes with $\phi > 90\text{ mm}$ .



Has basic modes of measurement:

- Normal mode



- Statistics mode

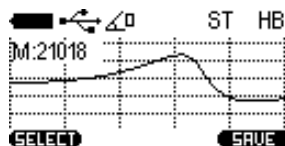
ST HB

Maximum	112.0
Minimum	93.0
Deviation	6.8
Average	104.0
Num. of meas.	6

- Smart mode



- Signal mode





**Sealed housing with rubber protective strips - Hardness testers is ideal for use in workshop and field conditions with high humidity, dust, etc. Hardness tester has frost-resistant display that allows user to use the device at any season and in any climatic zone of the Earth.**

### **Combined Hardness Tester NOVOTEST T-UD2 specifications:**

UCI probe types	1kgf (10N) 2.2 lbf, 5kgf (50N) 11lbf
Leeb probe types	D, DC, DL, C, D+15, E, G
Indenter	Diamond Indenter (UCI), Hardened ball (Leeb)
Measuring direction	Any direction 360°
Measurement hardness range:	
- Rockwell, HRC	20 - 70
- Brinell, HB	90 - 450
- Vickers, HV	230 - 940
- temporary resistance (tensile strength), MPa	370 - 1740
Measuring accuracy	HV+ / - 3%; HRC+ / - 1,5%; HB+ / - 3%;
Hardness Scale	HRC, HB, HV, MPa
Materials	<ul style="list-style-type: none"> <li>- UCI probe - pre-calibrated for steel.</li> <li>- Leeb probe - pre-calibrated for steel, alloy steel, cast iron, stainless steel, aluminum, bronze, brass, copper.</li> <li>- Additional custom materials for calibration.</li> </ul>
Operating temperature range, ° C	-20 to +50
Power supply	2 AA batteries
Dimensions, mm	120x60x25
Weight of electronic unit with battery, no more, kg	0.2
Batteries life, not less, h	20



The device has PC software with a comfortable and intuitive interface

**NOVOTEST AWP Measuring the hardness of metals**

**NOVOTEST**

Operation with archive | Set the color | Screen copies

Location of the archive: C:\Users\Aron\Desktop\ARM

Download the archive

Move | Copy | from 14.01.2013 to 12.12.2013 | Abort

Object:

Operator:

Export | Save

Record	Date/Time	Probe	N° probe	N° device
MEASUREMENT1	03/07/1963 23:00	UCI	1043861013	0081791113
MEASUREMENT	03/07/1963 23:00	REBOUND	Leeb	0081791113
MEASUREMENT2	03/07/1963 23:00	UCI	0081791113	0081791113
MEASUREMENT	01/01/2012 21:53	UCI	0081791113	0081791113
MEASUREMENT	01/01/2012 00:08	REBOUND	Leeb	0081791113
MEASUREMENT	01/01/2012 00:07	REBOUND	Leeb	0081791113

Series №01 Scale:HRC Material: Steel

Maximum	62,4
Minimum	61,1
Deviation	1,3
Average	61,7
Standard deviation	2,2%
Mean square deviation	0,6
Variation coefficient	0,9%
The homogeneity of the s...	Yes
Number of measurements	3

Histogram | Print | Delete



## The advantages of Hardness Tester NOVOTEST T-UD2:

- Hardness measurement of any mass products with a thickness of 1 mm - inaccessible to the dynamic (Leeb) hardness testers (small parts, thin-walled structures, pipes, tanks, steel sheets, articles of complex shape, hardness control of metal coatings, etc.)
- Small imprint after measuring (mirror surfaces of shafts necks, blades, gear teeth, etc.)
- Measuring the hardness of the surface hardened layer
- Wide range of hardness
- Only basic functions, nothing extra
- Possibility to use in field conditions with high humidity and dust
- Convenience and ease of measurement
- Optimized number of buttons
- Contrast display with bright back-lighting
- Automatic recognition of probe
- Indication of the type of connected probe
- Calibrations stored in memory of probe
- Very easy in operation and calibration
- Internal memory and communication with PC
- New, intuitive menu with tips on the buttons
- Extended temperature range (frost, down to - 40°C)
- Water resistant case
- Rubber bumper protected case





## Standard set of Combined Hardness Tester NOVOTEST T-UD2

- Electronic block
- UCI probe
- Leeb probe
- 2 batteries AA
- Charger
- USB cables
- Operating manual
- Software for PC
- Case



## Additional options for ordering of Combined Hardness Tester NOVOTEST T-UD2

- UCI probe
- Leeb probe
- Batteries
- Charger
- USB-cable
- Set of measures of hardness
- Case





Using the Combined Hardness Tester NOVOTEST T-UD2:

