## Portable Hardness Tester - NOVOTEST

Combined Hardness Tester NOVOTEST T-UD3 combines two methods of measuring hardness by an indirect method: Ultrasonic Contact Impedance (ASTM A1038) and Leeb (ASTM A956). This makes the device the most versatile portable device in the world. T-U3 only Ultrasonic Contact Impedance and T-D3 only Leeb Impedance.



The Combined Hardness Tester NOVOTEST T-UD3 allows user to measure the hardness of any metals, parts of any shape and thickness, measure the hardness of the surface hardened layers and evaluate the tensile strength.





### **BUILT-IN CAMERA**

The device has a built-in camera, which allows the user to store a measurement archive of images of the tested objects with binding of hardness to a specific place on the product.

## **Advantages:**

- Small indenter imprint (suits for mirror surfaces of shafts necks, blades, gear teeth, etc.)
- Measuring surface hardened layers hardness
- Wide range of hardness testing
- Various measurement modes
- 88 combinations of materials and hardness scales (calibrations)
- Calibration of any scale in any range
- Convenience and ease of measurement
- Optimized number of buttons

- Large full-color graphic display with bright backlight
- Built-in photo camera for thorough reports
- Automatic probe types recognition
- Connected probe types indication
- The calibrations are stored in UCI probe memory
- Extended operating temperature range (frost, down to  $-40^{\circ}$ C)
- Internal memory and communication with a PC
- New intuitive menu with tips on the buttons
- Optional wireless mini printer
- Waterproofed housing
- Rubber bumper protected housing
- Internal clock
- Hardness value measuring for any mass products with more than 1 mm thickness (small parts, thinwalled structures, pipes, tanks, steel sheets, articles of complex shape, hardness testing of metal coatings, etc.)
- Different operating modes:
  - Graph the graph building mode
  - Histogram the histogram building mode
  - Statistics provides statistics for the current set of measurements
  - Smart filters the incorrect measurements
  - Signal displays the probe signal (only for the Leeb probe)

## **Specifications**

UCI probe types

Leeb probe types

Measuring range

Measuring accuracy

- 1kgf (10N) 2.2 lbf
- 5kgf (50N) 11lbf
- 10kgf (98N) 22lbf
- D
- DC
- DL
- C
- D+15
- E
- G
- HRC:20~70
- HB:90~650
- HV:230~940
- Tensile strength, MPa: 370~1740
- User calibrations for any range
- (for example: HV100-1600)
- HRC: 2HRC
- HB: 10HB
- HV: 15HV

Standards	<ul> <li>ASTM A1038</li> <li>ASTM A956</li> <li>ASTM A370</li> <li>ISO 16859</li> <li>ASTM E140</li> <li>ISO 18265</li> <li>DIN 50159</li> <li>GB/T 34205</li> </ul>
Indenter	UCI probe – Diamond indenter Leeb probe – Hardened ball
Measuring direction	Any direction 360°
Data storage	Limited only by the memory card up to 32Gb
Communication	Upload data to PC and export as a spreadsheet (USB cable and software included )
Hardness scales	<ul> <li>UCI probe – HRC, HB, HV, MPa</li> <li>Leeb probe – HRC, HRB, HB, HV, HL, MPa</li> <li>Additional custom scales for calibration</li> </ul>
Materials	<ul> <li>Ultrasonic (UCI) probe – pre-calibrated for steel</li> <li>Dynamic (Leeb) pre-calibrated for steel, alloy steel, cast in</li> <li>Additional custom materials for calibration</li> </ul>
Data display	<ul> <li>Load applied/contact (UCI)</li> <li>Angle (Leeb)</li> <li>Single test result</li> <li>Max, Min, Average of tests</li> <li>Number of tests,</li> <li>Deviation</li> <li>Var. coeff.</li> <li>Histogram, Signal and Smart Modes</li> <li>(Filter of incorrect measurements).</li> </ul>
Language	<ul> <li>English</li> <li>German</li> <li>French</li> <li>Polish</li> <li>Russian <ul> <li>*additional languages available by request</li> </ul> </li> </ul>
Indication	Color LCD display (320×240)
Operating environment	<ul> <li>Temperature: -20°C~40°C</li> <li>Humidity: 30%~80%R.H.</li> </ul>
Power supply	DC 4,5V (3 pcs batteries AA)
Instrument dimensions	160x75x30mm
Net weight	Approx. 0.3kg (without probe)
Gross weight (package)	2kg
Package dimensions, cm	33*27*10
Battery life	Approx. 10 hours.

#### Standard Package depending on T-UD3, T-U3 or T-D3

- Hardness tester •
- UCI probe (10N, 50N or 98N for choice)
- Leeb probe (D type) •
- 3pcs AA batteries •
- Test Block (OPTIONAL) •
- Charger ٠
- USB cable •
- Operating manual
- Software for PC (Need Download or Web Link)
- Case •





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