

# Combined Hardness Tester - NOVOTEST T-UD3, U3 or D3

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  $-40^{\circ}\text{C}$ )
- 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, thin-walled 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

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

Leeb probe types

- D
- DC
- DL
- C
- D+15
- E
- G

Measuring range

- HRC:20~70
- HB:90~650

	<ul style="list-style-type: none"> <li>• HV:230~940</li> <li>• Tensile strength, MPa: 370~1740</li> <li>• User calibrations for any range (for example: HV100-1600)</li> </ul>
Measuring accuracy	<ul style="list-style-type: none"> <li>• HRC: 2HRC</li> <li>• HB: 10HB</li> <li>• HV: 15HV</li> </ul>
Standards	<ul style="list-style-type: none"> <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 ) <ul style="list-style-type: none"> <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>
Hardness scales	<ul style="list-style-type: none"> <li>• Ultrasonic (UCI) probe – pre-calibrated for steel</li> <li>• Dynamic (Leeb) pre-calibrated for steel, alloy steel,</li> <li>• Additional custom materials for calibration</li> </ul>
Materials	<ul style="list-style-type: none"> <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 (Filter of incorrect measurements).</li> </ul>
Data display	
Language	<ul style="list-style-type: none"> <li>• English</li> <li>• German</li> <li>• French</li> <li>• Polish</li> <li>• Russian</li> </ul> *additional languages available by request
Indication	Color LCD display (320×240)
Operating environment	<ul style="list-style-type: none"> <li>• Temperature:-20°C~40°C</li> </ul>

- Humidity: 30%~80%R.H.

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.
Warranty	3 (1+2) years
Package gross weight, kg	1.8-2kg

#### 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
- USB cable
- Operating manual
- Software for PC (Need Download or Web Link)
- Case



## Region Suppliers Group

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