



NOVOTEST

Ultrasonic Thickness Gauge NOVOTEST UT-1M

Available with
Bluetooth



Datasheet

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1. Introduction

Ultrasonic Thickness Gauge NOVOTEST UT-1M is used for operational non-destructive testing of the thickness of products with one-way access, at the moment this method is the most common in the world for solving such tasks.

The method is based on the property of materials to conduct ultrasound, ultrasonic waves are excited with the piezoceramic plate in the transducer and penetrate into the material through the couplant, then reflected from the bottom surface of the tested sample, and returns to the transducer. Based on the obtained sound transit time in the material, the device calculates the thickness in accordance with the velocity of propagation of ultrasonic waves in the test sample. The thickness value is displayed on the device's display, the measurement process takes about 1 second.

NOVOTEST Lab is your real laboratory in your pocket!

The results of measurement, adjustment and calibration of the ultrasonic thickness gauge in smartphone – the innovative NOVOTEST application for smartphones based on Android.

The functions of devices have no been so wide before! With the Bluetooth connection, your smartphone is able to control all the functionality of the NOVOTEST ultrasonic thickness gauge without wires. The intuitive interface of the application itself, access to the Internet, mail and instant messengers, touch screen, camera, microphone and GPS receiver of the mobile device make the use of NOVOTEST devices much more convenient and versatile.

The main advantages of the Ultrasonic Thickness Gauge NOVOTEST UT-1M:

- **WIDE RANGE OF MEASUREMENTS**

To measure products in a wide range with one transducer, unlike most similar devices, the Ultrasonic Thickness Gauge NOVOTEST UT-1M has a gain control function, which allows operator, for example, with a 5 MHz transducer, to measure steel products in the range from 0.5 to 500 mm and more.



- **B-SCAN AND AUTOMATIC DEFECT ALARM FUNCTION**

To visualize the product profile, if necessary not only point measurement, but also scanning, a B-scan is implemented in the device, which allows the user to visually see thinning and thickening of the wall of the testing object.

Also, for ease of use, the device has an automatic defect alarm function, its meaning is that the operator can select boundary thickness values (minimum and maximum) when crossing the values of which the device will signal through the speaker, and also give a visual signal.



- ARCHIVE OF PROBES AND MEASUREMENTS

Ultrasonic Thickness Gauge NOVOTEST UT-1M has the ability to save transducer's parameters (delay line, V-correction, etc.), and also has reference values for the wave velocities of many often measured materials stored in devices's memory, which allows the user to blindly (without reference data and a sample material for calculating speed) to measure various products with one-way access

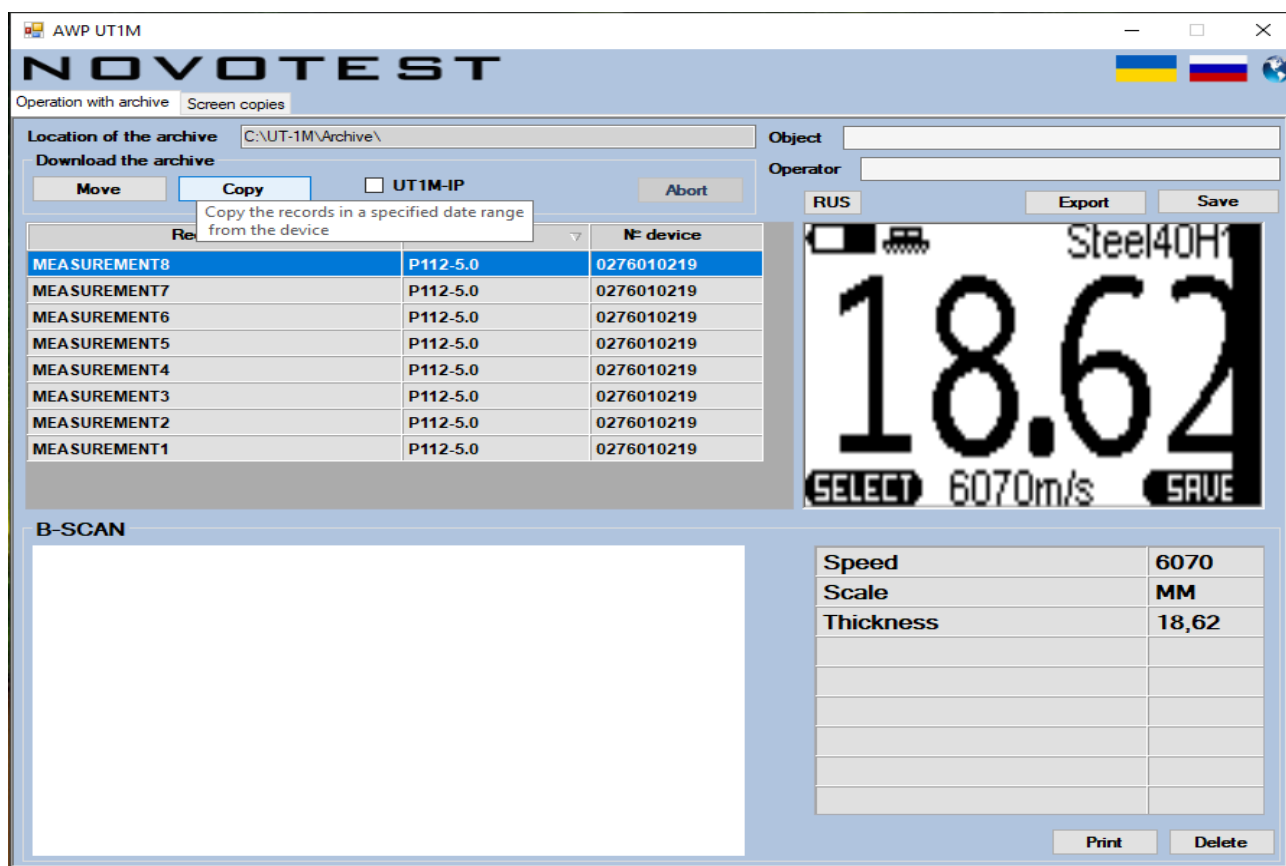


- PRACTICAL HOUSING

Ultrasonic Thickness Gauge NOVOTEST UT-1M is made in an ergonomic shockproof case, the silicone cover of which prevents the device from malfunctioning in case of a dropped down to floor or ground. Also, the device can be used in extreme climatic conditions, the temperature range of operating conditions is from -20 to +40 ° C.



The device allows user to record the measurement results in the archive of the device, and subsequently transfer them to a PC using special software.



2. Specifications

2.1 Advantages

Wide range of measuring thicknesses

- Convenience and ease in operation
- Minimum number of controls
- Select the type of probe through single button
- Preset velocity of ultrasound
- Graphical display with backlight
- Compensation of probe delay
- Control of the batteries
- Mapping the presence of acoustic coupling on the graphic display
- Fixation of the last measurement result in the removal of the transducer surface

2.2 Specifications

Measuring thicknesses range , mm:	0.45 ... 1000 or more
•Probe 10MHz – P112-10-6 / 2	•range 0.45-300 mm
•Probe 5MHz – P112-5-10 / 2	•range 0.8-500 mm
•Probe 2,5MHz – P112-2,5-12 / 2	•range 2.5-1000 mm
Probe dimensions, mm:	
•Probe 10MHz – P112-10-6 / 2	•D12×15 mm
•Probe 5MHz – P112-5-10 / 2	•D17×20 mm
•Probe 2,5MHz – P112-2,5-12 / 2	•D20×21 mm
Diameter of probe contact area, mm:	
•Probe 10MHz – P112-10-6 / 2	•9 mm
•Probe 5MHz – P112-5-10 / 2	•14 mm
•Probe 2,5MHz – P112-2,5-12 / 2	•16 mm
Size of plate:	
•Probe 10MHz – P112-10-6 / 2	•6 mm
•Probe 5MHz – P112-5-10 / 2	•10 mm
•Probe 2,5MHz – P112-2,5-12 / 2	•12 mm
Optional probes	•Echo-Echo 5MHz probes for through-coating testing •High temperature 5MHz probes, up to 250 C
Setting range of the ultrasonic velocity, m / s	1000-17000
Discrete readings on the digital indicator, mm	0.1
Response time, with no more than	1
Basic measurement accuracy, mm	± (0,01 T+0.05)

Echo-Echo mode (through coating measuring), max thickness of paint coating, mm 1 (with Echo-Echo probes only)

Standards	<ul style="list-style-type: none"> •ASTM E797 •EN 14127 •EN15317
Storage of measurement results	256
Menu languages	English, Spanish, Russian
Overall dimensions, mm	120x60x25
Operating temperature range, ° C	-5 to +40
Power supply	2 AA batteries
Time of continuous work hours, not less, h	10
Weight of electronic unit with battery, no more, kg	0.2

2.3 Available options

- Couplant
- UT-probes
- Calibration blocks

2.4 Standard package

- Electronic unit Ultrasonic Thickness Gauge
- Transducer (probe) – 1 pc
- AA batteries – 2 pcs
- Charger
- Cable for PC
- Operating manual
- Case

