

EM4000 specifications



> Design and manufacture of non-destructive testing equipment  
Contactless EMA new generation thickness gauges

Range of measured thickness for steel	2..80 mm
Range of measured thickness for steel without clearance	2..200 mm
Thickness measurement error	0.08 mm
Permissible clearance between the sensor and tested object with the EMT14012 transmitter	up to 3 mm
Range of measured thicknesses in non-conductive coatings	0...4 mm
Measurement error for non-conductive coating thickness	0.1 mm ±3%
Permissible sensor skew relative to the tested object surface normal	± 25°
Lowest permissible radius of curvature of the tested object surface	≥10 mm
Highest number of measurements per second	4
Range of sound velocity setting	1000...9999 m/s with 1 m/s step
Operating frequency of the device	4 MHz
Duration of continuous work without battery recharge	7 hours
Range of operating ambient temperature	-20...+50 °C
Range of operating temperature on the tested object surface	-20...+80 °C (-20 ...+750°C where the EMT40004T transducer is used)
Dimensions	185 x 43 x 35 mm



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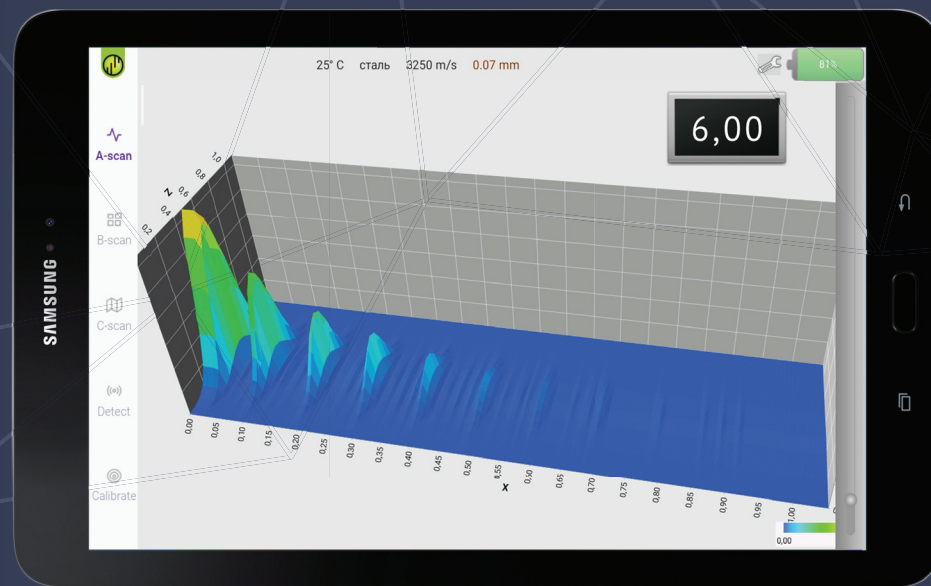
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EM4000  
EMA thickness gauge

- > Ability of measuring metal thickness and thickness of metal coating;
- > Color LED display with shock-resistant glass cover can show A-scan;
- > Quick-detachable connections on the sensor and the device;
- > Measurement of thickness in objects heated up to 750 °C.







The EM4000 electromagnetic acoustic thickness gauge is capable of connecting to a tablet, smartphone or another device based on the Android OS. This allows expanding the thickness gauge features, analyzing A-scans, B-scans, working with strobes, selecting a thickness measurement mode, signal processing parameters, etc. The EMA thickness gauge can be connected to a tablet either wirelessly via Bluetooth or using a USB cable.

## Description:

- The EM4000 EMA thickness gauge is designed for thickness measurement on steel pipes, sheet metal, rods, and other products made from steel, aluminum and other metals, with a operating gap of up to 3 mm between the sensor and metal.

Operation of the EMA thickness gauge requires no preliminary surface preparation, no couplant is required. The tested sample surface may be covered with dirt, a layer of rust or salt deposits, or may have other non-conductive coating (paint, varnish, enamel, plastic, etc.). In addition to measuring metal thickness, the EM4000 allows measuring the thickness of non-conductive coating on metal.



The device uses a special data processing algorithm that provides correct thickness measurements in the presence of disturbing factors such as metal anisotropy, usage of several reflectors, exposure to external interference. The algorithm developed by our experts allows to reduce human factor and simplify the device interface.

## High temperature EMA transducer:

- A **special sensor** allows using the EM4000 thickness gauge to inspect objects heated up to 750 °C.

