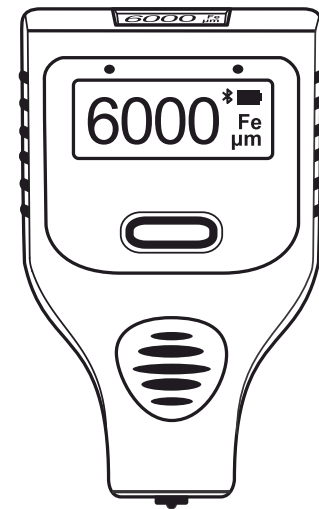


THICKNESS COATING GAUGE MD 1000 PRO MAX

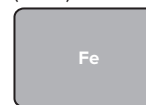
for measurement on all metallic body parts



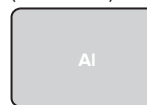
DEFINITION

Standard Coating Foil

Ferrous metal
(Steel)



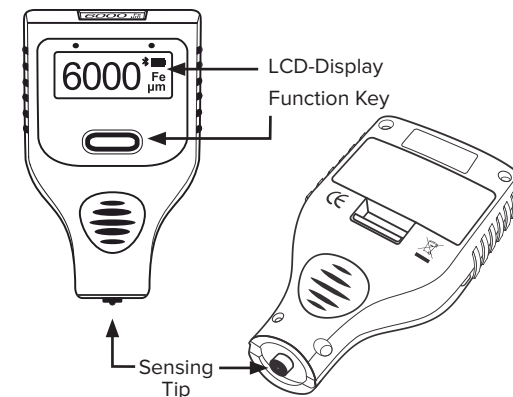
Non-Ferrous metal
(Aluminum)



5 pieces



Standard thicknesses of plastic film
5 pieces from 50 to 1000 μm



FUNCTION KEY

The instrument has a multi-function key for power on/off, as well as for the following functions and accessing the settings menu for:

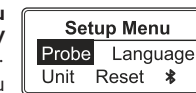
1. „Probe“ - Setting the measurement mode for non-automatic substrate detection.
2. „Language“.
3. „Unit“ - Switching from „mils“ to „μm“ and „mm“.
4. Factory setting **“Reset”** self-calibration.
5. „*“ - **Bluetooth**.
6. **Rotation of the display by 180°.**
7. Change **displayed size** on the main display (large or small).
8. „Calibration“.

SETTINGS MENU

To enter the settings menu, press and hold the multi-function key **with the device switched off** until the settings menu (**Setup Menu**) appears on the display.

Select the **desired menu item** for the setting by **briefly pressing** the multi-function key.

Wait briefly until you automatically reach the desired menu. Select the desired setting/unit there and wait until the device saves it.



THE FOLLOWING OPTIONS CAN BE SET:

- 1) „Probe“ (measurement mode):
 - **AUTO** (the instrument automatically detects the substrate to be measured).
 - **MAG** (magnetic induction - this setting is suitable for substrates made of ferromagnetic metals - ferrous metals).
 - **EDDY** (eddy current method - this setting is suitable for non-ferromagnetic substrates – nonferrous metals, such as aluminum).

- 2) „Language“ The menu languages available are English, German, Spanish, Turkish, Russian, Ukrainian, Kazakh and Kyrgyz.
- 3) „Unit“ (unit) - you can select μm, mil or mm.
- 4) „Reset“ (restoration of factory setting) - to restore the factory setting, please select this function and wait until briefly „Reset...“ and thereafter „Finish!“ is shown on the display. This resets the device to the factory setting.

The factory setting resets the device to the delivery state. After the factory setting, the instrument can be calibrated again.

The factory setting/self-calibration is sufficient to precisely determine the paint thickness differences on the vehicle.

- 5) „*“ **Bluetooth** - for connection to an app for creating a measurement report.

- 6) **Rotate display 180°** - In operating mode, briefly press the multifunction button until one beep sounds, to rotate the display by 180 degrees (release the key immediately after the beep sounds, otherwise the device will switch off).

7) Changing the displayed size on the main display

The device has 2 display options:

1. **Big** display mode (default setting).
2. **Small** display mode.

To switch between these options (big or small display mode), press and hold the **function button** while the device is switched off until «Switch Font» appears on the main display and the displayed size is changed.

Release the button immediately after changing the display size, otherwise the device will switch off.

Display illumination:

The device has a display illumination that turns on automatically when the device is switched on and every time it is operated and remains on for 30 seconds.

CALIBRATION

First, have one of the two calibrating discs, e.g. the **iron disc** (Ferrous) ready.

Steps:

1. Switch on the device by **briefly** pressing the **multifunction key**.
2. Then press and **hold down** the multifunction key and **immediately** place the sensor on the calibration disk **while holding down** the key.
3. The display shows briefly „Cal. Finish!“ and afterwards „0“
4. **Remove the sensor** from the calibration disk and **release the multifunction key**.



(This automatically calibrated the instrument and terminated the calibration mode).

Note: If you press and hold the multifunction key for 3 seconds without performing a calibration procedure, the instrument will turn off.

Repeat the same calibration procedure also on the other disc (**non-ferrous**).

INSTRUCTION

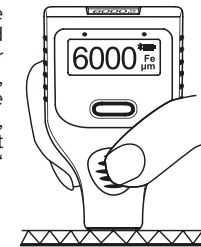
Power on and off:

1. Keep the sensing tip of the meter away from any substrate or any magnetic field.
2. **Briefly** press the multi-function key to switch on the device. **After switching on, the last measured value is displayed.**

3. To **turn off** the device, press the multi-function key for **3 seconds** and the device will turn off (**after the second „Beep“** sound).
4. Auto Power Off (APO):
 - Leave the gauge without operation for 2 minutes, power turns off automatically.
 - Audible signals sound before the shutdown.

Measuring:

1. Press the sensing tip of the gauge to contact coated surface tightly, wait for the reading to appear, measuring value and the material (**Fe** or **NFe**) is shown, herewith the measurement is completed (**One „Beep“ sound announced**).
2. If the meter shows **„No Metal“**, this means the coating thickness on **Ferr** is more than **6000 μm** or on **Non-Ferr** is **more than 3500 μm** or the **measuring material is not metal** (for example: plastic, wood, etc.)



The screen changes colors, depending on the measured thickness as follows:

- Less than 170 μm – „white“
- From 170 μm to 350 μm – „blue“
- From 350 μm to 6000 μm – „red“.

DEACTIVATE COLOR CHANGE

If required, this color change function can be switched off, so that the display always remains white at any thickness to enable better image and video recordings from the display.

1. Press and hold the function button until the **settings menu** appears.
2. Select the „Language“ option in the menu and select **„English (Eng)“**.
3. Wait until **„Start System...“** appears on the display.
4. Press and **hold the function button** until the question **„Backlight Change?“** appears on the display.
5. **Release the button** and **press it again briefly** to confirm deactivation.
6. The display briefly shows **„White...“** to confirm that the color change is deactivated.

This completes the function change.

Note: If the color change is not deactivated, check whether the function button has been pressed fully and long enough and repeat the steps.

Activate color change:
Follow steps 1 to 5 **above**.

6. After completing the steps, **„Color...“** appears on the display.

Zinc function:

The device is capable of detecting galvanized parts with a coating thickness **below 1000 μm**. If zinc is measured, the display shows **„FZ“** next to the measured value.



Detection of magnetic putty:

The device is able to detect magnetic putty. If the device detects magnetic putty, **„Fe Putty“** is **blinking** every second in the display and the screen is illuminated in red (**double „Beep“ sound announced**).



Small Display

Possible display options:

1. Measured values and substrate on which the measurement is made (Ferrum or Non-Ferrum).
2. Display when zinc is detected.
3. Display when magnetic putty is detected.

MD 1000 PRO MAX

SENSOR
made of wear-resistant ruby

AUTOMATIC
calibration, shutdown, substrate detection

DETECTION
of galvanized parts and magnetic putty

MEASURING RANGE
Fe: 0 - 6000 μm , nFe: 0 - 3500 μm
(Measurement accuracy $\pm 2\% + 1 \mu\text{m}$)

WINTER-RESISTANT
at an ambient temperature of -20°C to $+50^{\circ}\text{C}$

LIGHTNING-FAST
response time under 0,5 seconds

DISPLAY ILLUMINATION
3-color with automatic switch on

2 DISPLAYS
LCD and **OLED** (rotatable by 180°)

AUDIBLE
signal during measurement and shutdown

SWITCHING
between mils and μm

INTRODUCTION

This instrument is a portable, easy to use and compact-sized digital "ferrous" or "non-ferrous" coating gauge, designed for simple one hand operation. It can also detect galvanizations as well as magnetic putty. The coating thickness gauge is equipped with display illumination, self-calibration/reset and an automatic switch-off function to extend the battery life.

It also has 2 displays, a small OLED display and a main LCD display.

SAFETY INFORMATION

IMPORTANT! Please read the safety and operation instructions before using the coating thickness gauge.

Ensure proper commissioning of the device. Please observe this operating manual.

Not a toy, keep the device away from children. The handling of measuring instruments must be monitored responsibly by trained personnel.

CAUTION

Do not use the unit near any device which generates strong electromagnetic radiation or near a static electrical charge, as these may cause errors.

→ Do not use the unit where it may be exposed to corrosive or explosive gases. The unit may be damaged, or explosion may occur.

→ Do not keep or use this unit in an environment where it will be directly illuminated by sunshine, or where it condenses. If you do, it may be deformed, its insulation may be damaged, or it may no longer function according to specification.

→ Do not place the meter on or around hot objects

($70^{\circ}\text{C}/158^{\circ}\text{F}$). It may cause damage to the case.

→ If the meter is exposed to significant changes in ambient temperature, allow 30 minutes for temperature stabilization, before taking measurement.

→ Condensation may form on the sensor when going from a cold to hot environment. Wait for 10 minutes for condensation to dissipate before taking measurements.

→ This unit is not constructed to be waterproof and dustproof. Do not use it in a wet or very dusty environment.

→ To ensure accurate measurement, make sure, that the surface is clean and the sensing tip contacts the coated surface tightly without tilting.

→ Please make sure there are no air bubbles between substrate and coating.

→ The use of measuring instruments in schools, training institutions, hobby and self-help workshops must be supervised by trained personnel.

→ The device is not intended for industrial and production purposes.

We do not assume any liability for consequential damages! In case of damage by disregarding this manual the warranty will void!

→ For material damage or personal injury, caused by improper use or disregard of the safety instructions we do not assume any liability!

For safety and certification reasons conversion and/or modification of the device is not permitted.

Make sure that the device is put into operation properly and follow the instructions in this operating manual.

→ The enclosed zeroing plates are only suitable for the

use of calibration of coating thickness meter itself. Apart from that to get accurate readings before use.

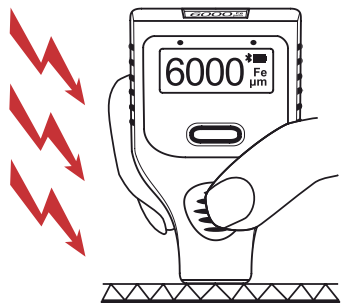
The zeroing on specific material substrate still needs to be done before taking formal measurements, such as Iron, Steel, Bronze, Copper, Nickel, Zinc, SUS304 and so on, which is to avoid the measuring errors caused by the difference of individual substrates. The end users can get much more accurate measuring readings on the specific metal under test by doing calibration.

WARNING

Electromagnetic field interference

This instrument uses magnetic field method to measure the coating thickness on ferrous metal base. If this meter was placed in the environment with 20mG (mini Gauss) or above, the accuracy would be affected. Suggest that the meter should to put far away from the interfered source at least 30cm.

Electromagnetic field interference can lead to incorrect measurement values.



Electromagnetic field strength: (unit = mini Gauss)

Electromagnetic Source	0cm	30cm
Cellular Phone Charger	50 ~ 500	< 1
Notebook Power Supply	100 ~ 1000	< 5
LCD-Display	10 ~ 100	< 1
Fan	100 ~ 1000	< 5
Reading Lamp	400 ~ 4000	< 10
Any product with coil inside should be considered.		

SPECIFICATION

Electrical

Detectable Substrate Material: Ferrous metal (iron, steel) and Non-Ferrous metal (copper, aluminium, zinc, bronze, brass, etc.).

Ferrous Thickness Range:
0 to 6000 μm (0 to 236 mils).

Non-Ferrous Thickness Range:
0 to 3500 μm (0 to 137,8 mils).

Display Resolution:
0.1mils/1 μm .

Response Time:
under 0.5 seconds.

Accuracy:

$\pm (2\% + 1 \mu\text{m})$ on 0 μm to 1999 μm ,
 $\pm (3\% + 2 \mu\text{m})$ on 2000 μm to 3000 μm ,
 $\pm (5\% + 2 \mu\text{m})$ on 3000 μm to 6000 μm ;

$\pm (2\% + 0,04 \text{ mils})$ on 0 mils to 78 mils,
 $\pm (3\% + 0,08 \text{ mils})$ on 78 to 118 mils,
 $\pm (5\% + 0,08 \text{ mils})$ on 118 to 236 mils;
(1 mil = 25,4 μm).

GENERAL

Operating Environment:

-4°F to 122°F (-20°C to 50°C) at < 75% R.H.

Storage Temperature:

4°F to 122°F (-15°C to 60°C),
0 to 80% R.H. with battery removed from meter.

Temperature Coefficient:

0,1 x (specified accuracy) / $^{\circ}\text{C}$ (< 18°C or > 28°C).

Auto Power Off: 2 minutes.

Battery: 1,5V (AAA size) x 2 pcs.

Battery Life:

30 hours (continuity) typical with alkaline battery.

Low Battery Indication:

The „ \square “ is displayed when the battery voltage drops below the operating level.

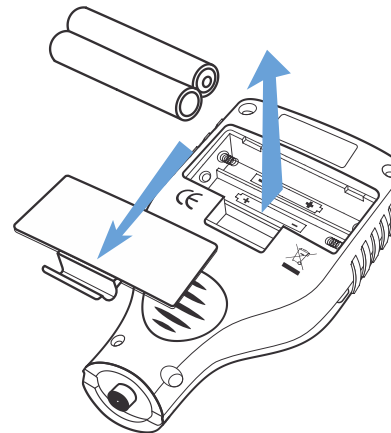
Dimensions: 103 mm (H) x 63 mm (W) x 25 mm (D).

Weight: Approx. 83 g (including battery).

MAINTENANCE

Installing and Replacing Battery

1. Power is supplied by 2 pcs 1,5V (AAA SIZE).
2. The „ \square “ appears in the display when battery replacement is needed.
3. Remove the battery cover by carefully lifting it up with your fingernail using the release tab and then carefully pulling it out of the holders.
4. Remove the batteries from the battery compartment.
5. Replace with 2 new unused branded AAA batteries with polarity as indicated on the bottom of Battery compartment.
6. Replace the Battery Cover.



CAUTION: When not in use for long periods **remove battery** (risk of leakage). Do not store in locations with high temperatures, or high humidity.

Weak batteries can affect the operation of the device.

CLEANING

Periodically wipe the case with a damp cloth and detergent, **do not use** abrasives or solvents.

[DOWNLOAD APP](#)



Car inspection report