

## Eddy-current magnetographing device Regula 7515M



**The device is intended for non-destructive examination of ferromagnetic and non-ferromagnetic materials for detection of Vehicle Identification Numbers falsifications.**

Regula 7515 is a compact device which consists of a controller constructed in metal body and two scanners used for non-destructive examination of the structure of electroconductive nonferromagnetic and ferromagnetic materials.

The device is used together with [Regula 7505M](#), expanding functionality of the latter.

### Functionality

- Investigation of markings on data carriers made of aluminium alloys (silumin bodies of cylinder blocks and reduction gear assemblies, manufacturer aluminium plates, duraluminium bodies)
- Restoration of fully destroyed original VINs on ferromagnetic materials
- Surface examination of nonferromagnetic materials in order to get information and (or) to prove the fact of VIN falsification
- Detection of welded joint defects in ferromagnetic materials and aluminium alloys as well as detection of weak signals in surface layers of ferromagnetic objects, e.g. residual (internal) stresses

### Operation

1. After being demagnetized, magnetic tape is placed on the examined surface and fixed.
2. One of the scanners chosen according to the type of material examined moves along the examined surface.
3. The controller forms voltage pulses with preset parameters and feeds them to the scanner.
4. Pulse current flowing in the scanner conductor forms an alternating magnetic field around it which induces eddy currents in electroconductive material of the examined object.
5. The eddy currents trajectories and the corresponding magnetic stray fields display the lines of electric resistance caused by the form, size and location of defects on the examined object.
6. Obtained magnetograms of magnetic stray fields are visualized by [Regula 7505M](#) for further processing and expert analysis.

### Special features

- Automatic controller troubleshooting, control of battery charge provided that the charging unit is connected.
- Possibility to examine weak signals such as residual stress in surface layers of ferromagnetic and nonferromagnetic objects.

### Application

- Border control/immigration services
- Forensic departments
- Customs authorities
- Law-enforcement agencies
- Car rental and leasing companies
- Auto service centers

Scanning time, m/s, max — 0,05

Width of the scanning area, mm, max — 20

Magnetic field intensity on the surface of the scanner conductor, kA/m — 30-35

Nonflatness of examined surface, mm, max — 0,5

Dimensions (length×width×height), mm:

- scanners — 30×45×70
- controller — 160×100×30
- charging unit — 100×80×30

Weight, kg:

- scanner:
  - for nonferromagnetic materials (Al) — 0,16
  - for ferromagnetic materials (Fe) — 0,21
- controller — 0,3
- charging unit — 0,15

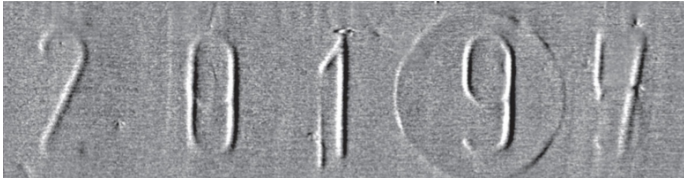
Scanner power supply voltage, V — 24

Rechargeable batteries GP17R8H:

- time of non-stop operation, min, min — 40 (≈ 120 copies)
- charging time, h — 8



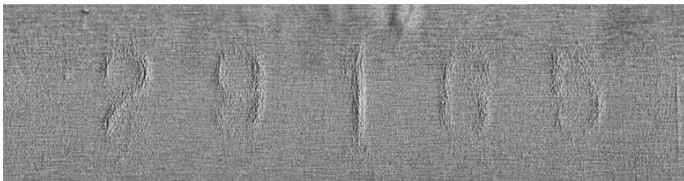
Al scanner function example: test object surface picture (digital photo)



Al scanner function example: test object magnetogram magneto-optical visualization



Fe scanner function example: test object surface picture (digital photo)



Fe scanner function example: test object magnetogram magneto-optical visualization