

Elcometer 415

Coating Thickness Gauge

Operating Instructions



Equipment described in these instructions is covered by the following Patents:

FNF UK Patent No: GB2306009B, FNF US Patent No: 5886522



This product meets the Electromagnetic Compatibility Directive.

The product is Class B, Group 1 ISM equipment according to CISPR 11

Group 1 ISM product: A product in which there is intentionally generated and/or used conductively coupled radio-frequency energy which is necessary for the internal functioning of the equipment itself.

Class B product are suitable for use in domestic establishments and in establishments directly connected to a low voltage power supply network which supplies buildings used for domestic purposes.

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More detailed instructions for this gauge can be downloaded from the Elcometer website:
www.elcometer.com

Select 'Elcometer 415' from the list

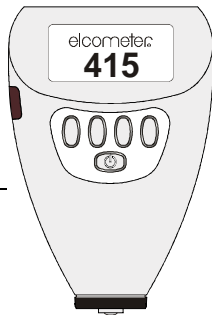
Thank you for your purchase of this Elcometer 415 Coating Thickness Gauge. Welcome to Elcometer. Elcometer are world leaders in the design, manufacture and supply of coatings inspection equipment. Our products cover all aspects of coating inspection, from development through application to post application inspection.

The Elcometer 415 Coating Thickness Gauge is a world beating product. With the purchase of this gauge you now have access to the worldwide service and support network of Elcometer. For more information visit our website at www.elcometer.com

1 ABOUT YOUR GAUGE

The Elcometer 415 Coating Thickness Gauge is a handheld gauge for fast and accurate measurement of the thickness of coatings on smooth, flat, unblasted^a metal substrates.

The probe in your gauge is suitable for measurement on ferrous steel and on non-ferrous aluminium substrates.



2 WHAT THE BOX CONTAINS

- Elcometer 415 Gauge
- 4 x Check Foils: 50, 125, 500 and 1000 μm / 2, 5, 20, and 40 mils (Paint and Powder Gauge only)


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- a. The Elcometer 415 is not suitable for use on blasted substrates. For this application, contact Elcometer for information on the Elcometer 456 Coating Thickness Gauge.

- 4 x Check Foils: 25, 75, 125 and 250 μm / 1, 3, 5, and 10 mils (Automotive Gauge only)
- Ferrous Checkpiece (Automotive Gauge only)
- Non-Ferrous Checkpiece (Automotive Gauge only)
- Carry Case
- Batteries
- Operating Instructions

The gauge is packed in cardboard and plastic packaging. Please ensure that this packaging is disposed of in an environmentally sensitive manner. Consult your Local Environmental Authority for further guidance.


3 BATTERIES

Fit two LR03 (AAA) alkaline dry batteries, or rechargeable equivalent; take care to ensure correct battery polarity.

When the battery symbol  on the top right of the display is empty, new batteries should be fitted.

4 SWITCHING ON/OFF

To switch on, press , or depress the probe.

The gauge switches off automatically after 60 seconds; to switch off manually, press and hold  until the display goes blank.

5 LANGUAGES

To change language, select MENU/SETUP/LANGUAGES or switch on while holding left key.

6 CHANGING UNITS

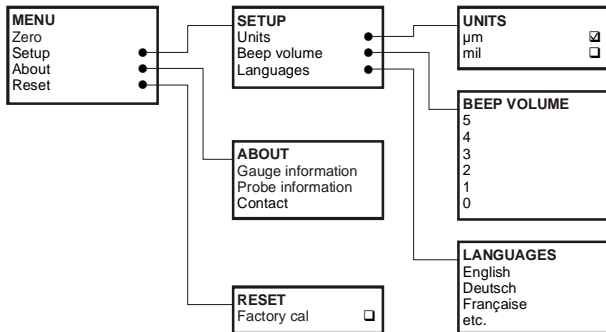
To change units, select MENU/SETUP/UNITS

7 TAKING A READING

Hold the probe firmly against the surface you are measuring. The coating thickness, substrate type and units are shown on the display.

8 THE MENU

Press the MENU button to access all features of your gauge:



9 ADJUSTING GAUGE CALIBRATION

Before taking measurements, always adjust the calibration of your gauge by zeroing your gauge on uncoated steel or aluminium sample having the same substrate thickness and a similar smooth surface finish as the item to be measured.

1. Select MENU/ZERO
2. When indicated by the display, place the probe on the uncoated substrate.

The display will show 0 μm (or 0.0 mil) and is immediately ready to use.

You may wish to test the calibration using the foils supplied with your gauge.

If a sample of uncoated substrate is not available, use the factory calibration zero:

Select MENU/RESET/FACTORY CAL/YES.

10 PROBES

The probe is a consumable item and will eventually wear. Probe life will depend on the number of measurements taken and how abrasive the coating is. Probe life can be prolonged by careful positioning of the probe on the surface. If the probe becomes worn or damaged, return your gauge to Elcometer for probe replacement and re-programming.

11 STORAGE



This gauge incorporates a Liquid Crystal Display (LCD). If the display is heated above 50°C (120°F) it may be damaged. This can happen if the gauge is left in a car parked in strong sunlight.

12 MAINTENANCE

You own one of the finest hand-held coating thickness gauges in the world. If looked after, it will last a lifetime.

The gauge does not contain any user-serviceable components. In the unlikely event of a fault, the gauge should be returned to your local Elcometer supplier or directly to Elcometer. The warranty will be invalidated if the gauge has been opened.

Contact details can be found:

- Stored in the gauge (Select MENU/ABOUT/CONTACT).
- On the outside cover of these operating instructions.
- At www.elcometer.com

13 TECHNICAL DATA

| | |
|--|--|
| Range: | 0 μm to 1000 μm (0 mils to 40 mils) |
| Accuracy: | $\pm 3\%$ or $\pm 3 \mu\text{m}^{\text{b}}$ (± 0.12 mil) |
| Resolution: | 1 μm (0.1 mils) |
| Operating temperature (ambient ^c): | 0°C to 50°C (32°F to 120°F) |
| Operating temperature, maximum (probe): | 80°C (176°F) |
| Storage temperature: | -10°C to 55°C (14°F to 130°F) |
| Batteries: | 2 x LR03 (AAA), alkaline ^d dry batteries or rechargeable equivalents. |

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- b. Whichever is the greater.
- c. Operation outside these limits depends upon climatic conditions. If required, contact Elcometer for further information.
- d. Alkaline batteries must be disposed of carefully to avoid environmental contamination. Please consult your local environmental authority for information on disposal in your region.
- Do not dispose of any batteries in fire.**