elcometer® Coating thickness gauges, model series 456C

For separate Bigfoot™ sensors

Application:
Ident. No. 610: For measuring non-magnetic coatings (paintwork, plastics, chrome, copper, zinc etc.) on magnetic substrates.
Ident. No. 615–625: For measuring non-magnetic coatings (paints, plastics, chrome, copper, zinc etc.) on magnetic substrates and for measuring non-conductive coatings (paints, plastics etc.) on non-metallic substrates (copper, aluminium, zinc, bronze, brass, etc.)

Execution:
- Robust ABS plastic housing
- Large, easy-to-read 2.4" colour display
- Degree of protection: IP 64, dust-proof and water-resistant
- Data logging, concave from R=2 and convex from R=25
- **Ident. No. 610:** Connection for F sensor for ferrous (F) metal substrates
- **Ident. No. 615–625:** Connection for FNF combination sensor for ferrous (F) and/or non-ferrous (NF) metal substrates

Advantage:
- Fast samplings rates of over 70 measurements per minute
- Various calibration methods stored
- **Ident. No. 620:** View and delete measured values and delete batches
- **Ident. No. 625:**
  - View and delete measured values and batches
  - Alphanumeric batch names entered into device by user
  - Scanning and auto repeat mode with connected ultra/scan probe

Delivery:
Ident. No. 610–615: Measuring instrument, hand strap, protective sleeve, plastic bag, 2x AA batteries, operating instructions
Ident. No. 620–625: Measuring instrument, hand strap, transport case, screen protector, USB cable, ElcoMaster 2.0™ software, protective sleeve, 2x AA batteries, operating instructions

Notes:
Probes not included in scope of delivery. For suitable probes, see 45800 650-665.

Technical data:
- Test probe: Separately
- Min./max. layer thickness display range: 0-31 mm
- Layer thickness resolution: < 100 µm: 0.1 µm
- Accuracy (+/-): 50 µm
- Min./max. accuracy (+/-) in %: 1-3 %
- Measuring rate: > 70 measurements/min

Data transmission type					USB	USB/Bluetooth	USB/Bluetooth
Internal memory					5 measured values	1500 measured values	150000 measured values
Adjustable limit values					No	Yes	Yes
	Model	Type	Probe design				
45800...	A456CFBS	B	F	Ident. No.	610 ●	-	-
45800...	A456CF-NFBS	B	FNF	Ident. No.	615 ●	-	-
45800...	A456CF-NFSS	S	FNF	Ident. No.	-	620 ●	-
45800...	A456CF-NFTS	T	FNF	Ident. No.	-	-	625 ●

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Accessories for		45800 610	45800 615	45800 620	45800 625
45800... USB Bluetooth transmitter/receiver	Ident. No.	690 ○	692 ○	692 ○	692 ○

Ultrasonic wall thickness measuring instrument

Integrated probe

Application:
For undisturbed recording of material thicknesses of highly-diverse acoustically conductive materials such as metals, NF metals, ceramic, plastics, glass etc. Ideal for monitoring corrosion and erosion on closed components and structures or those accessible only from one side, e.g. pipes, tanks, large metal sheets etc.

Execution:
- Robust stainless steel housing
- Dust and water-proof, degree of protection IP 67
- Swivelling, backlit LCD display
- Integrated, replaceable 5 MHz probe
- mm/inch switch-over

Advantage:
- Simple operation using four function keys
- Automatic zero point calibration
- Calibration to known wall thickness(es) and/or known material sound velocity

Delivery:
Measuring instrument with replaceable probe (5 MHz), carrying strap, 100 ml coupling liquid, 1x 1.5 V AA battery, operating instructions, manufacturer's certificate, transport case

Technical data:
- Min./max. length measuring range: 1-250 mm
- Resolution of wall thickness: < 100 mm: 0.01 mm | > 100 mm: 0.1 mm
- Probe: Integrated
- Transceiver probe diameter: 12 mm
- Test frequency: 5 MHz

46100...	Ident. No.	500 ●

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Accessories for		46100 500
46100... Coupling liquids 500 ml for ultrasonic wall thickness gauges	Ident. No.	090 ○
46100... Coupling liquids 5 x 250 g bottles for ultrasonic wall thickness gauges	Ident. No.	520 ●

Ultrasonic wall thickness measurement
Overview of measurement methods and functions

ELCOMETER ultrasonic wall thickness gauges from the MTG model series feature different measurement modes depending on the model version, MTG2, MTD4, MTG6 or MTG8, to produce measurement values with the greatest possible accuracy.

Pulse-Echo (P-E) mode
- Ideal for hole mark and material defect detection.
- In this method, the overall thickness is measured from the base of the measurement head to the material thickness boundary (usually the rear panel).

Echo-Echo TruePaint (E-E)
- In this mode, termed TruePaint, the coating thickness is ignored and the material thickness is measured from the surface of the material to the material thickness boundary layer (usually the rear panel).
- A highly damped measurement head is required to use the Echo-Echo, TruePaint mode.

Sound velocity mode (VM)
- In sound velocity mode, the sound velocity of materials is measured.
- Ideal for determining the homogeneity of a material or alloy.
- For determining the correct sound velocity of a material for calibration.

Scan mode
- Ideal for examining large surfaces.
- The measuring instrument records measurement values with a measurement rate of 16Hz (16 measurements per second)
- The thickness is indicated live throughout together with an analogous bar chart that illustrates the relative thickness for the set zero value.
- Acoustic and visual warnings indicate deviations from the set boundary values.
- When the measurement head is removed, the average, lowest and highest thickness values are indicated.

Sequence or grid lots
- Individual measurement values can be saved in up to 1,000 alphanumeric sequence or grid lots.
- Where grid lots are used, the measurement values are saved in a type of calculation table.
- Grid lots: The inaccessibility function allows inaccessible areas to be saved in the grid.

B-image measurement value
- Time-based, two-dimensional cross-section B-image facilitates graphical rendering of the material thickness
- Ideal for relative depth analysis
- The zoom view of the B-image can be set either by the user or automatically.

Discrepancy mode
- Determines the deviation from the set nominal value.
- Indicates areas of a material that are thinner or thicker than expected.

Bar chart
- Analogue representation of the current measurement value
- The highest, lowest and average measurement values are also included
- Diagram is automatically updated when each measurement value is recorded

elcometer® Ultrasonic wall thickness measuring instrument
incl. 5 MHz dual-element probe, 1/4”

Application:
For non-destructive recording of material thickness, for use on steel materials only. Ideal for monitoring corrosion and erosion on closed components and structures or those accessible only from one side, e.g. pipes, tanks, large metal sheets etc.

Execution:
- Robust ABS plastic housing
- Large, easy-to-read 2.4” colour display
- IP 54 degree of protection, splash-proof
- Integral zero disc
- Red/green LEDs on the housing, for displaying the upper and lower limit value
- Includes 5 MHz 1/4” dual element measuring head

46100... | Ident. No. 100

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Notes:
Delivery includes 5 MHz 1/4” dual element measuring head

Technical data:
- Model: MTG 2
- Min./max. Pulsed-Echo (P-E) measuring range: 0.63-500 mm
- Resolution of wall thickness: 0.1 mm
- Accuracy (+/-): 0.1 mm
- Accuracy (+/-) in %: 1 %
- Calibration methods: Precalibrated
- Calibration memory: No
- Display mode: Measurement

Source: Hahn+Kolb Werkzeuge GmbH
Technical data subject to change.
Availability subject to country specific rules and regulations.

elcometer® Ultrasonic wall thickness measuring instrument

for separate test probes

Application:
For non-destructive recording of the material thickness of a wide range of acoustically conductive materials such as metals, NF metals, ceramic, plastics, glass, etc. Ideal for monitoring corrosion and erosion on closed components and structures or those accessible only from one side, e.g. pipes, tanks, large metal sheets etc.

Execution:
- Robust ABS plastic housing

- Large, easy-to-read 2.4" colour display
- IP 54 degree of protection, splash-proof
- Integral zero disc
- Red/green LEDs on the housing, for displaying the upper and lower limit value
- **Ident. No. 120–130:** Scan mode for uniform inspections

Notes:
Test sensor not included in scope of delivery!

Ident. No. 110

Ident. No. 120

Ident. No. 130

Model		MTG 4	MTG 6	MTG 8
Min./max. Pulsed-Echo (P-E) measuring range		0.63-500 mm	0.63-500 mm	0.63-500 mm
Min./max. Echo-Echo ThruPaint (E-E) measuring range		2.54-25.4 mm	2.54-25.4 mm	2.54-25.4 mm
Resolution of wall thickness		0.1 mm	0.1 mm | 0.01 mm switchable	0.1 mm | 0.01 mm switchable
Accuracy (+/-) (mm)		0.1	0.05	0.05
Accuracy (+/-) in % (%)		1	1	1
Number of measurements (PCS)		-	1500	100000
Number of batches (PCS)		-	1	1500
Calibration methods		1-point | Reset to factory calibration	1-point | 2-point | Material | Speed of sound | Known thickness | Reset to factory calibration	1-point | 2-point | Material | Speed of sound | Known thickness | Reset to factory calibration
Calibration memory		No	No	Yes
Display mode		Measurement	Measurement | Statistics | Bar chart of the scanned thickness | History chart	Measurement | Statistics | Bar chart of the scanned thickness | History chart | Measurements and difference | B-cross sectional view
Data recording		-	Sequence off function | Delete last measurement | Date and time signature	Sequence off function | Raster off function | Delete last measurement | Date and time signature | Alphanumeric lot names | Lot chart
46100...	Ident. No.	**110**	**120**	**130**
		○	○	○

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elcometer® Dual-element probes

For ultrasonic wall thickness measuring instruments in the MTG model series

Application:
Suitable for measuring e.g. steel, glass and thin plastics in conjunction with an Elcometer ultrasonic wall thickness gauge from the MTG series.

Advantage:
- **Ident. No. 205–210:** ThruPaint technology – ignores the thickness of coatings in Echo-Echo mode

Technical data:
- Test frequency: 5 MHz
- Cable output direction: Radial

Probe Ø inch			1/4	1/4	1/2
Cushioning effect			No	High cushioned	High cushioned
Measuring mode			-	Echo-Echo Thru-Paint (E-E)	Echo-Echo Thru-Paint (E-E)
46100...	TXC5M00CP-4	Ident. No.	**202** ○	-	-
46100...	TXC5M00CP-6	Ident. No.	-	**205** ○	-
46100...	TXC5M00EP-4	Ident. No.	-	-	**210** ○

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