

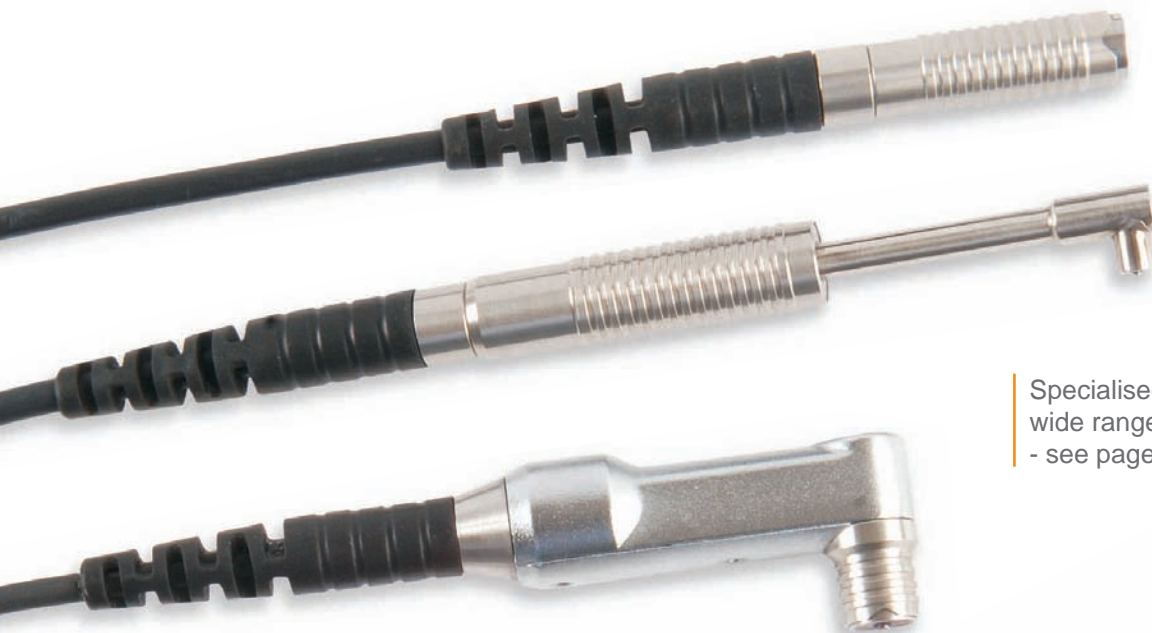
elcometer®



Elcometer 456
coating thickness gauge

Elcometer 456

Coating Thickness Gauge



Specialised probes to meet a wide range of applications, - see page 9

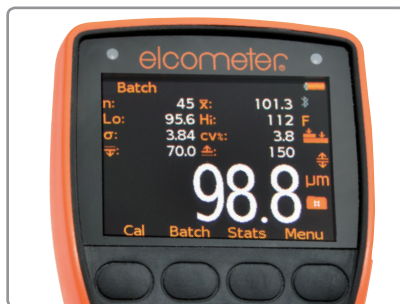
Integral and separate gauges to measure coatings up to 31mm (1220mils)

Dust and water resistant rugged design equivalent to IP64

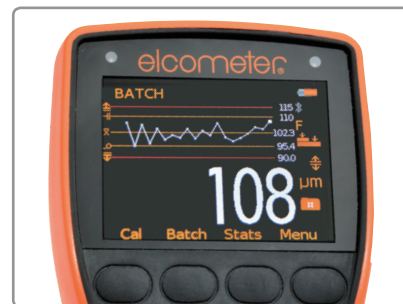
Secure probe connection for improved durability



Large easy to read measurements in Metric and Imperial units



View up to 8 user selectable statistics on screen



On-screen trend graph displaying last 20 measurement values

Fast reading rate of more than 70 readings per minute

Large easy to read colour display

Scratch and solvent resistant screen

Auto rotating display with tap awake feature

Stores up to 150,000 readings in alpha numeric batches

Large buttons with positive feedback

USB and Bluetooth® data output to ElcoMaster™ 2.0 software

supplied with
ElcoMaster™ 2.0
data management software
see page 12

compatible with
ElcoMaster™
mobile app
see page 12

available with
Bluetooth®
wireless technology
see page 12



Individual batch readings can be reviewed numerically or graphically

The Elcometer 456 sets new standards; providing reliable and accurate coating thickness measurements; helping you to become more efficient.

Elcometer 456

Coating Thickness Gauge



Bigfoot™ integral probe for accurate and repeatable measurements



Ergonomic design for comfort during continuous use



2.4" colour screen provides enhanced reading visibility at all angles

Easy

- Large buttons ideal for gloved hands
- Easy to use menus in multiple languages
- High contrast colour LCD with auto rotate
- High and low reading limit indicators
- Factory calibrated for immediate use

Accurate

- Measurement Capability to $\pm 1\%$
- Can be used in accordance with National & International Standards
- Temperature stable measurements
- Increased reading resolution for thin coatings
- Measures accurately on smooth, rough, thin and curved surfaces

Reliable

- Repeatable and reproducible
- 2 year gauge warranty
- Supplied with fully traceable test certificates
- Batch date and time stamp facility



Paperless Quality Assurance with the ElcoMaster™ suite of products

supplied with
ElcoMaster™ 2.0
data management software
see page 12

compatible with
ElcoMaster™
mobile app
see page 12

available with
Bluetooth®
wireless technology
see page 12

Coating Thickness Gauge

Elcometer 456

Rugged

- Sealed, heavy duty and impact resistant
- Dust and waterproof equivalent to IP64
- Scratch and solvent resistant display
- Durable gauge and probe construction
- Suitable for use in harsh environments

Efficient

- Fast reading rate of 70+ per minute
- Multiple calibration memories
- Alpha numeric batch identification
- User selectable calibration methods
- Compatible with all Elcometer software including ElcoMaster™ 2.0

Powerful

- Wide range of interchangeable probes
- USB and Bluetooth® data output
- Stores up to 150,000 readings in 2,500 batches
- Measures up to 31mm (1220mils) of coating on metal substrates



STANDARDS*:

AS 2331.1.4, AS 3894.3-B, AS/NZS 1580.108.1, ASTM B 499, ASTM D 1186-B, ASTM D 1400, ASTM D 7091, ASTM E 376, ASTM G 12, BS 3900-C5-6B, BS 3900-C5-6A, BS 5411-11, BS 5411-3, BS 5599, DIN 50981, DIN 50984, ECCA T1, EN 13523-1, IMO MSC.215(82), IMO MSC.244 (83), ISO 1461, ISO 19840, ISO 2063, ISO 2360, ISO 2808-6A, ISO 2808-6B, ISO 2808-7C, ISO 2808-7D, ISO 2808-12, JIS K 5600-1-7, NF T30-124, SS 184159, SSPC PA 2, US Navy PPI 63101-000, US Navy NSI 009-32

* Orange standards denote current standards, those in grey have been superseded but are still recognised by some industries

Product Features

■ Standard

□ Optional

	Model E	Model B	Model S	Model T
Fast, accurate reading rate; <i>70+ readings per minute</i>	■	■	■	■
Repeatable & reproducible measurements	■	■	■	■
Easy to use menu structure; <i>in 30+ languages</i>	■	■	■	■
Tough, impact, water & dust resistant; <i>equivalent to IP64</i>	■	■	■	■
Bright colour screen; <i>with permanent back light</i>	■	■	■	■
Scratch & solvent resistant display; <i>2.4" (6cm) TFT</i>	■	■	■	■
Large positive feedback buttons	■	■	■	■
USB power supply; <i>via PC</i>	■	■	■	■
Test certificate	■	■	■	■
2 year gauge warranty	■	■	■	■
Automatic rotating display; <i>0°, 90°, 180° & 270°</i>		■	■	■
Ambient light sensor; <i>with adjustable auto brightness</i>		■	■	■
Emergency light		■	■	■
Tap awake from sleep		■	■	■
Gauge software updates ¹ ; <i>via ElcoMaster™ 2.0 software</i>		■	■	■
Data output		■	■	■
USB; <i>to computer</i>		■	■	■
Bluetooth®; <i>to computer, pda or mobile phone</i>			■	■
On screen statistics		■	■	■
Number of readings; η		■	■	■
Mean (average); \bar{x}		■	■	■
Standard deviation; σ		■	■	■
Highest reading; <i>hi</i>		■	■	■
Lowest reading; <i>lo</i>		■	■	■
Coefficient of variation; <i>COV</i>		■	■	■
Elcometer index value ² ; <i>EIV</i>		■	■	■
Nominal dry film thickness; <i>NDFT</i>			■	■
IMO PSPC; <i>%>NDFT, %>90<NDFT, 90:10 pass/fail</i>			■	■
High & low limits; <i>definable audible & visual alarms</i>			■	■
Number above high limit;			■	■
Number below low limit;			■	■
Live reading trend graph; <i>in batch mode</i>			■	■
ElcoMaster™ 2.0 software & USB cable		□	■	■
Alarm; <i>daily (d), interval (i)</i>			d	d,i
Replaceable screen protectors	□	□	■	■
Protective case	□	■	■	■
Plastic transit case	□	□	□	■
Integral models; <i>with automatic gauge switch on</i>	■	■	■	■
Probe type; <i>Ferrous (F), Non-Ferrous (N), Dual (FNF)</i> ³	F, FNF	F, N, FNF	F, N, FNF	F, N, FNF
Measurement range	0-1500µm 0-60mils	0-13mm 0-500mils	0-1500µm 0-60mils	0-1500µm 0-60mils
Separate models; <i>with automatic probe recognition</i>		■	■	■
Probe type; <i>Ferrous (F), Non-Ferrous (N), Dual (FNF)</i> ³		F, N, FNF	F, N, FNF	F, N, FNF
Measurement range; see pages 9-11 for probe selection		0-31mm 0-1220mils	0-31mm 0-1220mils	0-31mm 0-1220mils

■ Standard □ Optional

¹ Internet connection required ² Elcometer Index Values are used in the automotive industry to assess a coating's overall quality; USA Patent Number US7606671B2

³ FNF Patent Numbers UK: GB2306009B; USA: 5886522

Coating Thickness Gauge

Elcometer 456

Product Features

■ Standard

□ Optional

	Model E	Model B	Model S	Model T
On-screen calibration instructions; <i>in 30+ languages</i>	■	■	■	■
Multiple calibration methods	■	■	■	■
Factory; <i>resets to the factory calibration</i>	■	■	■	■
2-point; <i>for smooth and rough surfaces</i>	■	■	■	■
1-point; <i>zero calibration</i>		■	■	■
Zero offset ⁴ ; <i>for calibration according to ISO19840</i>			■	■
Predefined calibration & measurement methods			■	■
ISO, SSPC PA2, Swedish, Australian			■	■
Automatic calibration; <i>for rapid calibration</i>			■	■
Calibration memory type; <i>gauge (g) or gauge & batch (gb)</i>	g	g	gb	gb
Number of batches; <i>with unique calibrations</i>			1	2,500
Calibration memories; <i>3 user-programmable memories</i>				■
Measurement outside calibration warning				■
Calibration lock; <i>with optional PIN code unlock</i>		■	■	■
Delete last reading		■	■	■
Gauge memory; <i>number of readings</i>		Last 5	1,500	150,000
Individual batch calibrations; <i>sent to PC via ElcoMaster™ 2.0</i>			■	■
Limits; <i>user definable audible & visual pass/fail warnings</i>			■	■
Gauge (g) or gauge & batch specific (gb) limits			g	gb
Date and time stamp			■	■
Batch types; <i>normal, counted average, IMO PSPC</i>			■	■
Batch review graph				■
Review, clear & delete batches			■	■
Copy batches and calibration settings				■
Alpha-numeric batch names; <i>user definable on the gauge</i>				■
Fixed batch size mode; <i>with batch linking</i>				■

Technical Specification

Display information	2.4" (6cm) QVGA colour TFT display, 320 x 240 pixels
Battery type	2 x AA dry cell batteries, rechargeable batteries can also be used
Battery life	approx 24 hours of continuous use at 1 reading per second ⁵
Gauge dimensions (h x w x d)	141 x 73 x 37mm (5.55 x 2.87 x 1.46")
Gauge weight (including batteries supplied)	Separate: 161g (5.68oz) Integral: 156g (5.50oz)
Operating temperature	-10 to 50°C (14 to 122°F)
Packing List	Elcometer 456 gauge, calibration foils (integrals only), wrist harness, transit case (T), protective case (B, S, T), 1 x screen protectors (S, T), 2 x AA batteries, operating instructions, USB cable (S, T), ElcoMaster™ 2.0 software (S, T) For separate gauge probe options see pages 9-11

■ Standard

□ Optional

⁴ Zero Offset USA Patent Number US6243661

⁵ Using default settings & lithium batteries supplied, alkaline or rechargeable batteries may differ

Elcometer 456

Integral & Separate model range



The Elcometer 456 is available in four different models. Each gauge provides the user with increasing functionality - from the entry level Elcometer 456 Model E, to the top of the range Elcometer 456 Model T.

Integral gauges are ideal for single handed operation as the wide footprint of the Bigfoot™ internal probe provides greater stability during measurement - allowing for consistent, repeatable and accurate results.

Separate models, with their wide range of probes, provide even greater measurement flexibility. See pages 9-11 for more details.

Integral Model Options

C

Scale 1	Range: 0-1500µm (0-60mils)		Accuracy*: ±1-3% or ±2.5µm (±0.1mil)		
	Resolution: 0.1µm: 0-100µm; 1µm: 100-1500µm (0.01mil: 0-5mils; 0.1mil: 5-60mils)				
	Model E	Model B	Model S	Model T	Certificate
Elcometer 456 Ferrous Integral	A456CFEI1	A456CFBI1	A456CFSI1	A456CFTI1	●
Elcometer 456 Non-Ferrous Integral	-	A456CNBI1	See separate gauges with N2 PINIP™ Probe	See separate gauges with N2 PINIP™ Probe	●
Elcometer 456 Dual FNF Integral	A456CFNFEI1	A456CFNFB11	A456CFNFSI1	A456CFNFTI1	●

Scale 2	Range: 0-5mm (0-200mils)		Accuracy*: ±1-3% or ±20µm (±1.0mil)		
	Resolution: 1µm: 0-1mm; 10µm: 1-5mm (0.1mil: 0-50mils; 1mil: 50-200mils)				
For higher resolution & accuracy on thin coatings Scale 2 gauges can be switched to the Scale 1 mode measurement performance					
	Model E	Model B	Model S	Model T	Certificate
Elcometer 456 Ferrous Integral	-	A456CFBI2	See separate gauges with F2 PINIP™ Probe	See separate gauges with F2 PINIP™ Probe	●

Scale 3	Range: 0-13mm (0-500mils)		Accuracy*: ±1-3% or ±50µm (±2.0mils)		
	Resolution: 1µm: 0-2mm; 10µm: 2-13mm (0.1mil: 0-100mils; 1mil: 100-500mils)				
	Model E	Model B	Model S	Model T	Certificate
Elcometer 456 Ferrous Integral	-	A456CFBI3	See separate gauges with F3 PINIP™ Probe	See separate gauges with F3 PINIP™ Probe	●

Separate Model Options

	Model E	Model B	Model S	Model T	Certificate
Elcometer 456 Ferrous Separate	-	A456CFBS	A456CFSS	A456CFTS	•
Elcometer 456 Non-Ferrous Separate	-	A456CNBS	A456CNSS	A456CNTS	•
Elcometer 456 Dual FNF Separate	-	A456CFNFBS	A456CFNFSS	A456CFNFTS	•

Probes are supplied separately, see page 9 for details

Accessories

T99922341	Self Adhesive Screen Protectors (x10)
T99921325	USB Cable
T45622371	Benchtop Inspection Stand - for Separate Gauges

• Certificate supplied as standard.

* Whichever is the greater

Probe range

Elcometer 456

All Elcometer 456 probes are fully interchangeable; ferrous gauges accept any ferrous probe, non-ferrous gauges accept any non-ferrous probes and the dual FNF gauges accept all ferrous, non-ferrous and dual FNF probes.

Available in a number of designs and scale ranges to meet your specific application, all probes are supplied with an Elcometer Test Certificate and a set of calibration foils[†]

Straight

Measures coatings on both flat and curved surfaces

Right Angle

For taking readings where access is restricted

Mini

Ideal for edges, narrow pipes and small surface areas

PINIP™

Plug-in probes convert a separate to an integral gauge

Telescopic

Extending right angle probes for out of reach areas

Specialist

Designed for measurement on specialist substrates such as graphite or for electro-plating

Waterproof

Sealed for use under water at depth, even in diving gloves

High Temperature

For use on hot coated materials up to 250°C (480°F)

Anodiser

Chemical resistant washable probes ideal for the anodising environment

Armoured

Probes with metal reinforced heavy duty cables

Soft Coating

Large surface area probes for soft reach materials (HVCA approved)










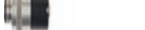
Ferrous probes measure non magnetic coatings on ferro-magnetic substrates. Non-ferrous probes measure non conductive coatings on non-ferrous metal substrates. Dual FNF probes measure both ferrous and non-ferrous applications with automatic substrate detection.













Unless stated, Elcometer separate probes have a maximum operating temperature of 150°C (300°F), PINIP™ probes have a maximum operating temperature of 80°C (176°F).



[†] Foil sets are appropriate to the separate probe's scale range - see page 15 for the foil values supplied in each set.

Elcometer 456

Probe range

Scale 1	Range: 0-1500µm (0-60mils)					Accuracy*: ±1-3% or ±2.5µm (±0.1mil)	
	Resolution: 0.1µm: 0-100µm; 1µm: 100-1500µm (0.01mil: 0-5mils; 0.1mil: 5-60mils)					Certificate: ●	
Probe Design		Ferrous F	Non-Ferrous N	Dual Probe FNF	Minimum Headroom	Minimum Sample Diameter†	
	Straight	T456CF1S	T456CN1S	T456CFNF1S	F, N 85mm (3.35")	F, N, FNF (F)	4mm (0.16")
					FNF 88mm (3.46")		6mm (0.24")
	Right Angle	T456CF1R	T456CN1R	T456CFNF1R	F, N 28mm (1.10")	F, N, FNF (F)	4mm (0.16")
					FNF 38mm (1.50")		6mm (0.24")
	Mini 90° (M5) 45mm (1.77")	T456CFM5R90A	T456CNM5R90A	-	F, N 16mm (0.63")	F, N	4mm (0.16")
	Mini 90° (M5) 150mm (5.9")	-	T456CNM5R90C	-	N 16mm (0.63")	N	4mm (0.16")
	Mini 90° (M5) 400mm (15.7")	-	T456CNM5R90E	-	N 16mm (0.63")	N	4mm (0.16")
	Straight Sealed	T456CF1E			F 85mm (3.35")	F	4mm (0.16")
	Mini 90° (M5) Sealed 45mm (1.77")	T456CFME5R90A			F 16mm (0.63")	F	4mm (0.16")
	Mini 90° (M5) Sealed 45mm (1.77") 2m C	T456CFME5R90A-2			F 16mm (0.63")	F	4mm (0.16")
	Anodiser	-	T456CN1AS	-	N 100mm (3.94")	N	4mm (0.16")
	PINIP™	T456CF1P	T456CN1P	T456CFNF1P	F 170mm (6.69")	F, N, FNF (F)	4mm (0.16")
					N, FNF 180mm (7.09")		6mm (0.24")

Scale 2	Range: 0-5mm (0-200mils)					Accuracy*: ±1-3% or ±20µm (±1.0mil)	
	Resolution: 1µm: 0-1mm; 10µm: 1-5mm (0.1mil: 0-50mils; 1mil: 50-200mils)					Certificate: ●	
Probe Design		Ferrous F	Non-Ferrous N	Dual Probe FNF	Minimum Headroom	Minimum Sample Diameter†	
	Straight	T456CF2S	T456CN2S	-	F 89mm (3.50")	F	8mm (0.32")
					N 88mm (3.46")		14mm (0.55")
	Right Angle	T456CF2R	-	-	F 32mm (1.26")	F	8mm (0.32")
	Armoured	T456CF2ARM	-	-	F 138mm (5.43")	F	8mm (0.32")
	Telescopic 56-122cm (22-48")	T456CF2T	-	-	F 36mm (1.42")	F	8mm (0.32")
	Soft Coating	T456CF2B	-	-	F 89mm (3.50")	F	8mm (0.32")
	Waterproof 1m (3') cable	T456CF2SW	-	-	F 138mm (5.43")	F	8mm (0.32")
	Waterproof 5m (15') cable	T456CF2SW-5	-	-	F 138mm (5.43")	F	8mm (0.32")
	Waterproof 15m (45') cable	T456CF2SW-15	-	-	F 138mm (5.43")	F	8mm (0.32")
	Waterproof 30m (98') cable	T456CF2SW-30	-	-	F 138mm (5.43")	F	8mm (0.32")
	Waterproof 50m (164') cable	T456CF2SW-50	-	-	F 138mm (5.43")	F	8mm (0.32")
	PINIP™	T456CF2P	T456CN2P	-	F 174mm (6.85")	F	8mm (0.32")
					N 185mm (7.28")		14mm (0.55")
	Hi-Temperature 250°C (480°F)	T456CF2PHT	-	-	F 174mm (6.85")	F	8mm (0.32")

Scale 3	Range: 0-13mm (0-500mils)					Accuracy*: ±1-3% or ±50µm (±2.0mils)	
	Resolution: 1µm: 0-2mm; 10µm: 2-13mm (0.1mil: 0-100mils; 1mil: 100-500mils)					Certificate: ●	
Probe Design		Ferrous F	Non-Ferrous N	Dual Probe FNF	Minimum Headroom	Minimum Sample Diameter†	
	Straight	T456CF3S	-	-	F 102mm (4.02")	F	14mm (0.55")
	PINIP™	T456CF3P	-	-	F 184mm (7.24")	F	14mm (0.55")


















† FNF (F): FNF probe in F mode FNF (N): FNF probe in N mode

* Whichever is the greater

● Certificate supplied as standard.

Probe range

Elcometer 456

Scale 6		Range: F: 0-25mm (0-980mils) N: 0-30mm (1200mils)				Accuracy*: ±1-3% or ±100µm (±4.0mil)			
		Resolution: 10µm: 0-2mm; 100µm: 2-30mm (1mil: 0-100mils; 10mils: 100-1200mils)				Certificate: 			
Probe Design			Ferrous F	Non-Ferrous N	Dual Probe FNF	Minimum Headroom		Minimum Sample Diameter†	
	Straight		T456CF6S	T456CN6S	-	F	150mm (5.90")	F	51 x 51mm² (2 x 2 sq. inch)
						N	160mm (6.30")	N	58mm (2.29")
	Armoured		T456CF6ARM	T456CN6ARM	-	F	190mm (7.48")	F	51 x 51mm² (2 x 2 sq. inch)
						N	200mm (7.87")	N	58mm (2.29")
Scale 7		Range: F: 0-31mm (0-1220mils)				Accuracy*: ±1-3% or ±100µm (±4.0mil)			
		Resolution: 10µm: 0-2mm; 100µm: 2-31mm (1mil: 0-100mils; 10mils: 100-1220mils)				Certificate: 			
Probe Design			Ferrous F	Non-Ferrous N	Dual Probe FNF	Minimum Headroom		Minimum Sample Diameter†	
	Armoured		T456CF7ARM	-	-	F	200mm (7.87")	F	55 x 55mm² (2.17 x 2.17 sq. inch)
Scale 0.5		Range: 0-500µm (0-20mils)				Accuracy*: ±1-3% or ±2.5µm (±0.1mil)			
		Resolution: 0.1µm: 0-100µm; 1µm: 100-500µm (0.01mil: 0-5mils; 0.1mil: 5-20mils)				Certificate: 			
Probe Design (M3)			Ferrous F	Non-Ferrous N	Dual Probe FNF	Minimum Headroom		Minimum Sample Diameter†	
	Mini 45mm (1.77")		T456CFM3---A	T456CNM3---A	-	F	6mm (0.24")	F	3mm (0.12")
						N	6mm (0.24")	N	4mm (0.16")
	Mini 90° 45mm (1.77")		T456CFM3R90A	T456CNM3R90A	-	F	16mm (0.63")	F	3mm (0.12")
						N	16mm (0.63")	N	4mm (0.16")
	Mini 45° 45mm (1.77")		T456CFM3R45A	-	-	F	18mm (0.71")	F	3mm (0.12")
	Mini 90° 150mm (5.90")		T456CFM3R90C	T456CNM3R90C	-	F	16mm (0.63")	F	3mm (0.12")
						N	16mm (0.63")	N	4mm (0.16")
	Mini 90° 300mm (11.8")		T465CFM3R90D	-	-	F	16mm (0.63")	F	3mm (0.12")
	Mini 45° 300mm (11.8")		T456CFM3R45D	-	-	F	18mm (0.71")	F	3mm (0.12")
	Mini 90° 400mm (15.7")		-	T456CNM3R90E	-	N	16mm (0.63")	N	4mm (0.16")
Scale 0.5 Graphite		Range: 0-500µm (0-20mils)				Accuracy*: ±1-3% or ±2.5µm (±0.1mil)			
		Resolution: 0.1µm: 0-100µm; 1µm: 100-500µm (0.01mil: 0-5mils; 0.1mil: 5-20mils)				Certificate: 			
Probe Design			Ferrous F	Non-Ferrous N	Dual Probe FNF	Minimum Headroom		Minimum Sample Diameter†	
	Mini 90°	Graphite 45mm (1.77")	-	T456CNMG3R90A	-	N	16mm (0.63")	N	4mm (0.16")
	Mini 90°	Graphite 150mm (5.90")	-	T456CNMG3R90C	-	N	16mm (0.63")	N	4mm (0.16")
	Mini 90°	Graphite 400mm (15.7")	-	T456CNMG3R90E	-	N	16mm (0.63")	N	4mm (0.16")

For a full range of calibration foils sets and coated standards see pages 14-15

● Certificate supplied as standard.



* Whichever is the greater

Professional inspection reports provide a competitive advantage in today's industrial environment.

The new ElcoMaster™ 2.0 is a fast, easy to use software solution for all your reporting requirements.

Using ElcoMaster™ 2.0's wizard, connecting a gauge to download data is fast and easy

Using ElcoMaster's™ inbuilt Report Designer, readings can quickly be displayed on an image or drawing

ElcoMaster™ 2.0 allows you to download all your inspection measurements - from any Elcometer gauge

 Suitable for use in Cloud Computing

Data can be stored in a simple file tree, by project and by inspection type. Data is clearly displayed in tabular format

Readings from different Elcometer gauges can be printed on the same report - and can be quickly inserted into standard report tables



ElcoMaster™ 2.0

ElcoMaster™ 2.0 gives you the power to review your data and produce professional reports quickly and easily. Internal wizards guide you through each step, from connecting a gauge to generating a report.

Features:

- Produce and combine measurements from any Elcometer inspection gauge in one report
- Add photographs, limits & notes to your reports
- Export to Excel or other spreadsheet formats
- Print, email or generate .pdf reports
- Design your own reports and drag & drop readings or statistics onto the report
- Combine multiple batches into one report
- Communicate and link with ElcoMaster™ for Android™
- Automatic upgrade notifications inform and allow users to upgrade their Elcometer gauges & ElcoMaster™ 2.0 software in the field

ElcoMaster™ for Android™

ElcoMaster™ for Android™ allows users to:

- Collect data via collection image templates, identifying where each reading should be taken
- Transfer live readings or batches from Elcometer Bluetooth® gauges to Android™ phones or tablet PC's
- Provides instant data analysis remotely and email key data, including readings, notes & photographs, etc. to the office from the field

For more information visit our website at elcometer.com.

Scan the QR code to download the ElcoMaster™ for Android™ Application now



Probe range

Elcometer 456

Probe Accessories

Jumbo Hand Grip

Ideal for precision placement for the most accurate results on flat and curved surfaces. Place the probe inside the Jumbo Hand Grip and take measurements - ideal when wearing gloves. Suitable for any Elcometer 456 Scale 1 or Scale 2 straight probes.

F and N Probes	Dual FNF Probes	
T9997766-	T99913225	Jumbo Adaptor



V-Probe Adaptor

Ideal for precision placement for the most accurate results on medium and large diameter curved surfaces such as pipes and cylinders. Suitable for any Elcometer 456 Scale 1 or Scale 2 straight probes.

F and N Probes	Dual FNF Probes	
T9997381-	T99913133	V-Probe Adaptor



Probe Replacement Jig

The Elcometer probe placement jig is the ideal accessory for measuring coatings on small or complex components but also when the highest levels of repeatability and accuracy are required.

T95012880	Probe Placement Jig - as displayed
Each probe placement jig is supplied with a probe housing to suit Scale 1 or Scale 2 straight probes and a component holder.	
T95013028	Component Hand Vice - as displayed
T95012888	Cable Release Assembly - ideal for remote measurements
T95015961	Dual FNF Probe Housing Adaptor
T95016896	Mini Probe Housing Adaptor



For a full range of calibration foils sets and coated standards see pages 14-15



Elcometer 995

Coated Thickness Standards



The Elcometer 995 Coated Thickness Standards are hard wearing, durable and are mounted in a protective folder. They provide the user with an ideal method to accurately measure the performance of the coating thickness gauge.

Features:

- $\pm 2\%$ accuracy, supplied with Calibration Certificate as standard
- Available with either Ferrous (F) or Non-Ferrous (N) substrates
- Each standard is individually serial numbered for traceability
- Can be re-certified by Elcometer to meet ISO requirements
- Standards available in a range of thicknesses
- Special thicknesses can be supplied to meet specific needs
- Coated with a hard wearing film for extended life span

Technical Specification

C

Part Number	Description	Values (μm)	Values (mils)	Certificate
T995111262	4 Piece Thickness Standards - Ferrous	Zero, 40, 75, 125, 175	Zero, 1.6, 3.0, 5.0, 7.0	•
T995111271	4 Piece Thickness Standards - Non Ferrous	Zero, 40, 75, 125, 175	Zero, 1.6, 3.0, 5.0, 7.0	•
T995111263	4 Piece Thickness Standards - Ferrous	Zero, 50, 80, 125, 200	Zero, 2.0, 3.0, 5.0, 8.0	•
T995111261	4 Piece Thickness Standards - Ferrous	Zero, 50, 150, 250, 500	Zero, 2.0, 6.0, 10, 20	•

Elcometer 990

Zero Test Plates



Elcometer provides a range of Zero Test Plates. When used in conjunction with a set of foils, Test Plates are ideal to test a coating thickness gauge's functionality and calibration, ideal for when it may be difficult or impractical to obtain an uncoated substrate.

For a list of foils and foil sets see page 15.

Technical Specification

Part Number	Description	Part Number	Description
T9999529-	2% Ferrous Zero Test Plate	T9999530-	2% Non Ferrous Zero Test Plate
T9994910-	1% Ferrous Zero Test Plate	T9994911-	1% Non Ferrous Zero Test Plate
T9994054-	Large Ferrous Zero Test Plate	T9994055-	Large Non Ferrous Zero Test Plate

Calibration Foils Sets

The Elcometer 990 Calibration Foils are ideal for use in the laboratory, on the production line or on site. Calibration foils or 'shims' are the most convenient way of creating a coating thickness standard on the substrate material, surface finish or form. This is the ideal method for adjusting the calibration of the coating thickness gauge to ensure the greatest possible accuracy.

Features:

- Metric and Imperial values displayed on each foil
- Available individually or in foil sets
- Precision foils with $\pm 1\%$ accuracy
- Each foil has a unique serial number for traceability
- Available in thicknesses from $12.5\mu\text{m}$ to 20mm (0.5 to 790mils)

Elcometer 990



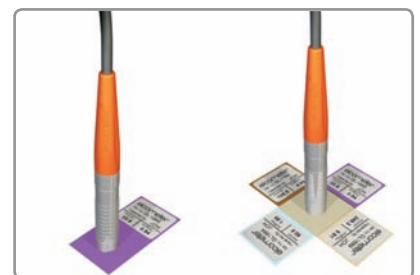
Technical Specification

Description	Foil Values (μm)	Foil Values (mils)	Un-Certified	Certified
Scale 1 Foil Set; 0-1500 μm (0-60mils)	25, 50, 125, 250, 500, 1000	1.0, 2.0, 5.0, 10, 20, 40	T99022255-1	T99022255-1C
Scale 2 Foil Set; 0-5mm (0-200mils)	25, 50, 125, 250, 500, 1000, 2000, 3000	1.0, 2.0, 5.0, 10, 20, 40, 80, 120	T99022255-2	T99022255-2C
Scale 3 Foil Set; 0-13mm (0-500mils)	250, 500, 1000, 2000, 4000, 8000	10, 20, 40, 80, 160, 315	T99022255-3	T99022255-3C
Scale 4 Foil Set; 0-250 μm (0-10mils)	12.5, 25, 50, 125, 250	0.5, 1.0, 2.0, 5.0, 10	T99022255-4	T99022255-4C
Scale 5 Foil Set; 0-500 μm (0-20mils)	12.5, 25, 50, 125, 250, 500	0.5, 1.0, 2.0, 5.0, 10, 20	T99022255-5	T99022255-5C
Scale 6 Foil Set; 0-30mm (0-1200mils)	1000, 2000, 5000, 9500, 15mm, 25mm	40, 80, 200, 375, 590, 980	T99022255-6	T99022255-6C
Scale M3 Foil Set; 0-500 μm (0-20mils)	12.5, 25, 50, 125, 250, 500	0.5, 1.0, 2.0, 5.0, 10, 20	T99022255-7	T99022255-7C
Scale 2B Foil Set ¹ ; 0-5mm (0-200mils)	25, 50, 125, 250, 500, 1000, 2000, 2000	1.0, 2.0, 5.0, 10, 20, 40, 80, 80	T99022255-8	T99022255-8C

How to use a calibration foil

When calibrating a coating thickness gauge using Elcometer calibration foils, place the probe in the centre of the foil, taking care not to rest the probe sleeve or the integral gauge's Bigfoot™ on the label.

Calibration foils can be carefully stacked in order to increase the thickness range, as shown in the image.



Calibration certificates

Every Elcometer 456 gauge and separate probe is supplied with a Test Certificate free of charge.

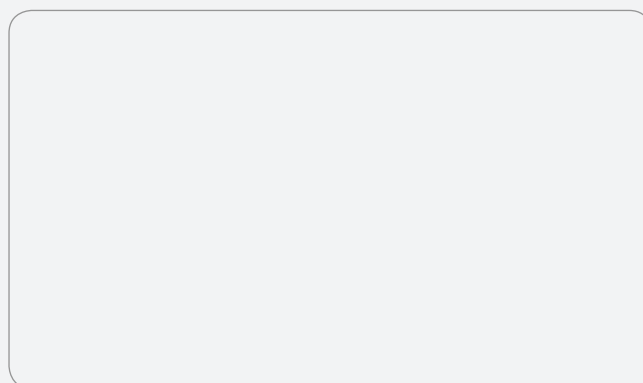
For separate probe gauges, the test measurements are generated using factory reference probes.

Each probe Test Certificate is generated using factory reference gauges.

Comprehensive Calibration Certificates, traceable to National Standards (UKAS and NIST) are also available and should be requested at the point of order. Please speak to your Elcometer representative for further information.



¹The Scale 2B foil sets are designed for soft coating probes and have a larger foil surface area



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