elcometer®

Elcometer 224

Digital Surface Profile Gauge

new

STANDARDS:
ASTM D 4417-B, SANS 5772,
US Navy NSI 009-32,
US Navy PPI 63101-000

The Elcometer 224 is available in two different models: Model B and Model T. Each gauge provides the user with increasing functionality - from the entry level Elcometer 224 Model B, to the top of the range Elcometer 224 Model T, with memory, alpha-numeric batching and Bluetooth® communication.

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

Standard and armoured probes are available for the separate models, providing even greater measurement flexibility. See pages 125 - 126 for more details.

supplied with
ElcoMaster™ 2.0
data management software
see page 264

compatible with
ElcoMaster™
mobile app
see page 266

available with
Bluetooth®
wireless technology
see page 123

Model Options   C

Part Number		Description	Certificate
Integral Gauge	Separate Gauge^		
E224C-BI	E224C-BS	Elcometer 224 Model B Digital Surface Profile Gauge	●
E224C-TI	E224C-TS	Elcometer 224 Model T Digital Surface Profile Gauge	●

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	Approximately 24 hours of continuous use at 1 reading per second#	
Minimum Headroom	Integral:	185mm (7.3")
	Separate:	See page 126
Gauge dimensions (h x w x d)	Integral:	168 x 73 x 37mm (5.61 x 2.87 x 1.46")
	Separate:	141 x 73 x 37mm (5.55 x 2.87 x 1.46")
Gauge weight (including batteries)	Integral:	218g (7.69oz)
	Separate:	161g (5.68oz)
Measurement range	0-500µm (0-20mils)	
Probe tip	Tungsten carbide tip 60° angle; Tip Radius: 50µm (2mil)	
Operating temperature	-10 to 50°C (14 to 122°F) Storage temperature -10 to 60°C (14 to 140°F)	
Accuracy & Resolution	Accuracy*: ±5% or ±5µm (±0.2mil); Resolution: 1µm (0.1mil)	
Packing List†	Elcometer 224 gauge, glass zero tile†, 2 x calibration foils†, wrist harness, plastic transit case (T), protective case, screen protector, probe protection cap†, 2 x AA batteries, test certificate, operating instructions, USB cable (T) & ElcoMaster™ 2.0 software (T)	

^ Probes are supplied separately, see pages 125 - 126 for details

* Whichever is the greater

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

† For separate gauges, the test foils, glass zero tile and probe protection cap are supplied with the separate probe.

● Test Certificate supplied as standard.

Digital Surface Profile Gauge

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Product Features

	Model B	Model T
Fast, accurate reading rate; *50+ readings per minute^*	■	■
Repeatable & reproducible measurements	■	■
Easy to use menu structure; *in 30+ languages*	■	■
Tough, impact, waterproof & dust resistant; *equivalent to IP64*	■	■
Bright colour screen; *with permanent back light*	■	■
Scratch & solvent resistant display; *2.4" (6cm) TFT*	■	■
Large positive feedback buttons	■	■
Flat & convex surfaces*	■	■
USB power supply; *via PC*	■	■
Test certificate	■	■
2 year gauge warranty	■	■
Automatic rotating display; *0°, 90°, 180° & 270°*	■	■
Ambient light sensor; *with adjustable auto brightness*	■	■
Emergency light mode	■	■
Gauge software updates[1]; *via ElcoMaster™ 2.0 software*	■	■
Data output	■	■
USB; *to computer*	■	■
Bluetooth®: *to computer, Android™ mobile phone or tablet*		■
On screen statistics	■	■
Number of readings, η; Mean (average), $\overline{x}$; Standard deviation, σ; Highest reading, hi; Lowest reading, lo; Coefficient of variation, *COV*	■	■
High & low limits; *definable audible & visual alarms*		■
Number above high limit;		■
Number below low limit;		■
ElcoMaster™ 2.0 software & USB cable		■
Alarm; *daily (d), interval (i)*		d,i
Date and time stamp *for each reading*		■
Replaceable screen protectors	■	■
Protective case	■	■
Plastic transit case	□	■
Measurement range	0-500µm (20 mils)	0-500µm (20 mils)
On-screen calibration instructions; *in 30+ languages*	■	■
Number of batches		2,500
Gauge memory; *number of readings*	Last 5	150,000
Delete last reading	■[#]	■
Limits; *user definable audible & visual pass/fail warnings*		■
Gauge (g) or gauge & batch specific (gb) limits		gb
Batch types; *normal, counted average*		■
Review, clear & delete batches		■
Copy batches and calibration settings		■
Alpha-numeric batch names; *user definable on the gauge*		■
Fixed batch size mode; *with batch linking*		■
Trend graph; *last 20 readings*		■
Review batch graph		■

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■ Standard   □ Optional
[1] Internet connection required   [#] Up to the last 5 readings can be deleted   * Patent applied for   ^Up to 25 readings per minute for the convex probe

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Digital Surface Profile Probes

new

Flat Surface Profile Probes
Supplied with either standard cables or armoured metal reinforced heavy duty cables, Elcometer surface profile probes are supplied with a glass zero plate, calibration test foils; nominal values 125µm (5.0mils) & 508µm (20mils) and an Elcometer test certificate.

Technical Specification   C

Range: 0-500µm (0-20mils)   Resolution: 1µm (0.1mil)   Accuracy: ±5% or ±5µm (±0.2mil)

Probe Design	Part Number	Minimum Headroom	Minimum Sample Diameter	Certificate
Flat Surface: Standard	T224C500US	125mm (4.92")	25mm (1.0")	●
Flat Surface: Armoured	T224C500UARM	165mm (6.50")	25mm (1.0")	●

new

Convex Surface Profile Probes
Supplied with either standard cables or armoured metal reinforced heavy duty cables, Elcometer convex surface profile probes are supplied with a glass zero tile, calibration test foils (nominal values 125µm (5.0mils) & 508µm (20mils) and an Elcometer test certificate.

Technical Specification   C

Range: 0-500µm (0-20mils)   Resolution: 1µm (0.1mil)   Accuracy: ±5% or ±5µm (±0.2mil)

Probe Design	Part Number	Minimum Headroom	Minimum Pipe Diameter	Certificate
Convex Surface: Standard*	T224C500UX	135mm (5.31")	75mm (3.0")	●
Convex Surface: Armoured*	T224C500UXARM	175mm (6.89")	75mm (3.0")	●

Accessories

Part Number		Description
Integral Gauge	Separate Gauge	
T22419793	T22419793	Probe Tip Protection Cap
T22420072	T22420072	Glass Zero Tile with Wallet
T22421882C	T22421882C	Certified Calibration Test Kit: 125µm & 500µm (5 & 20mils) Calibration Foils, Glass Zero Tile & Calibration Certificate
T99921325	T99921325	USB Cable
T99920130	T99920130	USB Bluetooth® Adaptor - for PC's without Bluetooth®
T99922341	T99922341	Self Adhesive Screen Protectors (x10)
T22423368	T99923369	Protective Case
T22423370	T22423371	Plastic Transit Case
T22420053	T22420053	Replacement Tip (Pack of 2) with Fixing Tool
T22420095	T22420095	Replacement Tip (Pack of 5)

* Patent applied for

● Test Certificate supplied as standard.