

# elcometer 456 Dry Film Thickness Gauge Probe Options

Combining over 45 years of probe design and build experience, with the latest materials and technology, the new Elcometer probes are even more accurate, repeatable and reliable than ever before. 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 surfaces areas

## PINIP

- Plug-in probes convert a separate to an integral gauge

## Telescopic

- Extending right angled probes for out of reach areas

## Waterproof

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

## High Temp

- For use on hot coated materials up to 250°C

## 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 materials (HVCA approved)

## Measurement Options

**Ferrous (F)** operation using electromagnetic induction probes for all non-magnetic coatings on a ferrous (magnetic) substrate, e.g. paint, plastic, enamel, powder, rubber, ceramic, galvanising, zinc, sprayed metal (aluminium or zinc), etc. on steel, cast iron, ferritic and duplex stainless steel, substrates etc.

**Non-Ferrous (N)** operation using eddy current probes for non-conductive coatings on non-ferrous metal substrates, e.g. anodising, paint, powder, lacquer, plastic, etc. on aluminium, brass, zinc, stainless steel, copper, titanium substrates etc.

**Dual (FNF)** operation combines the Ferrous and Non-Ferrous operation in a single probe. The gauge has user selection for auto or manual substrate determination.

## Technical Specifications

	<b>Ferrous</b>	<b>Non Ferrous &amp; FNF</b>	<b>PINIP</b>
Max Operating Temperature	Up to 150°C	Up to 80°C	Up to 50°C
Storage Temperature		-10 - 60°C	
Minimum Substrate Thickness	0.3 mm	0.1 mm	






†Foil sets are appropriate to the separate probe's scale range



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## Scale 1


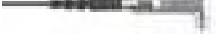








Range: 0-1500µm  
 Accuracy : ±1-3% or ±2.5µm  
 Resolution: 0.1µm: 0-100µm;  
 1µm: 100-1500µm

Probe Design		Ferrous	Non-Ferrous	Dual Probe	Minimum		Minimum	
		F	N	FNF	Headroom		Sample Diameter	
	Straight	T456CF1S	T456CN1S	T456CFNF1S	F, N	85mm	F, N, FNF (F)	4mm
	Right Angle	T456CF1R	T456CN1R	T456CFNF1R	F, N	28mm	F, N, FNF (F)	4mm
	Mini M5-90° 45mm	T456CFM5R90A	-	-	F	16mm	F	7mm
	Anodiser	T456CN1AS	-	-	N	100mm	N	4mm
	PINIP	T456CF1P	T456CN1P	T456CFNF1P	F	170mm	F, N, FNF (F)	4mm
					N, FNF	180mm	FNF (N)	6mm

## Scale 2

Range: 0-5mm (0-200mils) \*  
 Accuracy : ±1-3% or ±20µm  
 Resolution: 0.1µm: 0-1mm;  
 10µm: 1-5mm



*For higher resolution & accuracy on thin coatings Scale 2 ferrous probes can be switched to the Scale 1 mode measurement performance*

Probe Design		Ferrous	Non-Ferrous	Dual Probe	Minimum		Minimum	
		F	N	FNF	Headroom		Sample Diameter	
	Straight	T456CF2S	T456CN2S	-	F	89mm	F	8mm
	Right Angle	T456CF2R	-	-	N	88mm	N	14mm
	Armoured	T456CF2ARM	-	-	F	32mm	F	8mm
	Telescopic	T456CF2T	-	-	F	138mm	F	8mm
	Soft Coating	T456CF2B	-	-	F	36mm	F	8mm
	Waterproof	T456CF2SW	-	-	F	89mm	F	8mm
	Waterproof	T456CF2SW-5	-	-	F	89mm	F	8mm
	Waterproof	T456CF2SW-15	-	-	F	89mm	F	8mm
	PINIP	T456CF2P	T456CN2P	-	F	174mm	F	8mm
					N	185mm	N	14mm
	Hi-Temp	T456CF2PHT	-	-	F	174mm	F	8mm





## Scale 3

Range: 0-13mm  
 Accuracy :  $\pm 1-3\%$  or  $\pm 50\mu\text{m}$   
 Resolution: 0.1 $\mu\text{m}$ : 0-2mm;  
 10 $\mu\text{m}$ : 2-13mm

Probe Design		Ferrous	Non-Ferrous	Dual Probe	Minimum		Minimum	
		F	N	FNF	Headroom		Sample	† Diameter
	Straight	T456CF3S	-	-	F	102mm	F	14mm
	PINIP	T456CF3P	-	-	F	184mm	F	14mm





## Scale 6

Range: F: 0-25mm  
 N: 0-30mm  
 Accuracy :  $\pm 1-3\%$  or  $\pm 100\mu\text{m}$   
 Resolution: 10 $\mu\text{m}$ : 0-2mm;  
 100 $\mu\text{m}$ : 2-30mm

Probe Design		Ferrous	Non-Ferrous	Dual Probe	Minimum		Minimum	
		F	N	FNF	Headroom		Sample	† Diameter
	Straight	T456CF6S	T456CN6S	-	F	150mm	F	51x51mm <sup>2</sup>
	Armoured	T456CF6ARM	T456CN6ARM	-	N	160mm	N	58mm
					F	190mm	F	51x51mm <sup>2</sup>
					N	200mm	N	58mm

## Scale 0.5

Range: 0-500 $\mu\text{m}$   
 Accuracy :  $\pm 1-3\%$  or  $\pm 2.5\mu\text{m}$   
 Resolution: 0.1 $\mu\text{m}$ : 0-100 $\mu\text{m}$ ;  
 1 $\mu\text{m}$ : 100-500 $\mu\text{m}$

Probe Design		Ferrous	Non-Ferrous	Dual Probe	Minimum		Minimum	
		F	N	FNF	Headroom		Sample	† Diameter
	Mini M3	T456CFM3---A	T456CNM3---A	-	F	6mm	F	3mm
					N	6mm	N	4mm
	Mini-M3-90	T456CFM3R90A	T456CNM3R90A	-	F	16mm	F	3mm
					N	16mm	N	4mm
	Mini-M3-45	T456CFM3R45A	-	-	F	18mm	F	3mm
					N		N	4mm
	Mini-M3-90	T456CFM3R90C	T456CNM3R90C	-	F	16mm	F	3mm
					N	16mm	N	4mm

