

# Elcometer 208 Ultrasonic Thickness Gauges



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**At a glance**

- Robust easy to use gauges for measuring material thickness.
- Wide selection of probes for accurate measurement on your substrate.
- Ignores coating thickness - gives the material thickness below.

**Elcometer 208 & Ultrasonic Thickness Gauge**

The Elcometer Model 208 and 208DL are simple to use hand held Ultrasonic Thickness Gauges with the capability to measure material thickness whilst eliminating the thickness of the coating (on metal substrates only).

- Ignores the coating thickness
- Data output
- ElcoMaster™ and EDTS+ Excel link Software supplied free of charge with 208DL for report generation and archiving.
- Hand held and robust
- Backlight display

**Material Thickness**

The thickness of materials cannot always be determined by direct measurement as access to both sides is not always possible.

The effects of corrosion and erosion at the back of a metal panel may reduce its thickness significantly yet not affect the front surface. Pipelines, for example, may appear corrosion free on the outside but can be eroded by the flow of material on the inside.

Machined or cast items may have thin walls that cannot be determined by calipers or other non-destructive tests.

<b>Measurement Range</b>	0.63 - 500mm (0.025 - 19.999") 2.54 - 25.4mm (0.100 to 1.0") - in Echo-to-Echo Mode
<b>Velocity Range</b>	1250 - 10000m/s (0.0492 - 0.3930 in/μs)
<b>Accuracy</b>	±0.01mm (0.001")
<b>Resolution</b>	0.01mm (0.001")
<b>Units</b>	millimetres and inches
<b>Operating Temperature</b>	-20 to 50°C (-4 to 122°F)
<b>Keypad type</b>	Sealed membrane
<b>Display</b>	Digit Liquid Crystal Display with Backlight
<b>Power</b>	AA 1.5V Alkaline or 1.2V NiCad cell
<b>Weight</b>	295g (10oz)
<b>Size</b>	63.5 x 120.6 x 31.75mm (2.5 x 4.75 x 1.25")
<b>Case Type</b>	Extruded aluminium

Description		Elcometer 208	Elcometer 208DL
Echo-to-Echo Mode		•	•
High Speed Scan Mode		•	•
Alarm Mode		•	•
Data Output		•	•
Data Logging			•
EDTS <sup>+</sup> Excel Link Software		o	•
ElcoMaster™ Software		o	•
Part Number		C208- - - -1	C208DL- - - -1
<b>Accessories</b>	5MHz High Damped Transducer - For steel applications	T92016967	
	7.5MHz High Damped Transducer - Aluminium, stainless steel and titanium applications	T92016968	
	Ultrasonic Couplant (120ml / 4oz)	T92015701	
	High Temperature Ultrasonic Couplant (60ml / 2oz)	T92015874	
	Test Wedge 2-25mm	TX9205243-	
	Test Wedge 30-100mm	T9205270-	
<b>Packing List</b>	<b>Elcometer 208:</b> Elcometer 208 Gauge, Bottle of couplant, Batteries, Carrying case & Operating instructions		
	<b>Elcometer 208DL:</b> Elcometer 208DL Gauge, Bottle of couplant, CD with data transfer and data collection software, Data transfer cable, Batteries, Carrying case & Operating instructions		
<p>The Elcometer 208 and Elcometer 2108DL are not supplied with a transducer, please either select the specific Elcometer 208 transducer above or select from the Transducer Data Sheet.</p> <p>• = Included    o = Optional</p>			

ULTRASONIC TRANSDUCER SELECTION TABLE FOR ELCOMETER 205, 206, 206DL, 208, 208DL																				
Measurement Range  (in steel)  mm  inches	Material								Probe Type						Part Number	Frequency MHz (Colour Code)	Crystal Diameter		Wearface Diameter	
	Cast Iron	Plastic	Glass Fibre	Thin Glass Fibre	Steels	Glass	Thin Plastic	Aluminium	Potted	Straight Probe	Right Angle Probe	Microdot	High Temp (340°C/650°F)	Extra Resolution			Exxon Specification	mm		inches
3.8 – 50.8	•	•	•						•	•						T92015620	1.0	12.7	15.88	
	•	•	•						•		•					T92015621				
0.15 – 2.0	•	•	•							•		•				T92015622	(brown)	½	⅝	
	•	•	•								•	•				T92015623				
1.5 – 101.6	•	•		•					•	•						T92015626	2.25	6.35	9.53	
	•	•		•					•		•					T92015627				
0.06 – 4.0	•	•		•						•		•				T92015628	(red)	¼	⅜	
	•	•		•					•		•	•				T92015629				
	•	•		•					•	•			•			T92015631				
	•	•		•					•		•		•			T92015632				
1.5 – 127.0	•	•		•					•	•						T92015633	2.25	12.7	15.88	
	•	•		•					•		•					T92015634				
0.06 – 5.0	•	•		•						•		•				T92015635	(red)	½	⅜	
	•	•		•					•		•	•				T92015636				
	•	•		•					•	•			•			T92015637				
	•	•		•					•		•		•			T92015638				
1.5 – 50.8					•	•	•		•	•						T92015641	5.0	4.76	6.35	
0.06 – 2.0					•	•	•		•		•					T92015642				
1.02 – 152.4					•	•	•		•	•							T92015644	(green)	¾	¼
					•	•	•		•		•						T92015645			
					•	•	•		•		•						T92015646			
					•	•	•		•		•						T92015647			
					•	•	•		•		•	•					T92015648			
					•	•	•		•		•		•				T92015655			
1.27 – 507.7					•	•	•		•	•							T92015656	5.0	12.7	15.88
					•	•	•		•		•						T92015657			
0.05 – 19.99					•	•	•		•		•						T92015658	(green)	½	⅜
					•	•	•		•		•	•					T92015659			
					•	•	•		•		•		•				T92015660			
					•	•	•		•		•		•				T92015661			
1.02 – 152.4					•	•	•	•	•						•	T92015662	7.5	6.35	9.53	
0.04 – 6.0					•	•	•	•	•					•	T92015663					
0.635 – 152.4					•	•	•	•	•								T92015664	7.5	6.35	9.53
	0.025 6.0					•	•	•	•						•	T92015665				
1.02 – 152.4					•	•	•	•	•								T92015666	(grey)	¼	⅜
	0.04 – 6.0					•	•	•	•						•	T92015667				
0.06 – 10.0					•	•	•	•	•								T92015668	(blue)	¼	⅜
	0.06 – 10.0					•	•	•	•						•	T92015669				
1.02 – 152.4					•	•	•	•	•								T92015670	10.0	6.35	9.35
	0.04 – 6.0					•	•	•	•								T92015671			
1.52 – 254.0					•	•	•	•	•								T92015672	(white)	¼	⅜
	0.06 – 10.0					•	•	•	•								T92015673			
0.06 – 10.0					•	•	•	•	•								T92015674	(white)	½	⅜
					•	•	•	•	•								T92015676			
					•	•	•	•	•								T92015677			
				•	•	•	•	•									T92015678			
				•	•	•	•	•									T92015679			

## The Elcometer Ultrasonic Thickness Gauge Features Explained

<b>Interface-to-Echo Mode</b>	In interface-to-echo mode, the gauge can take readings on thicker plastics and other materials between 1.65mm and 25.4mm (0.065" to 1")
<b>Echo-to-Echo Mode</b>	Measurements can be taken on materials as thin as 0.15mm (0.006 inches). In echo-to-echo mode, the user can take measurements on pre-coated materials without having to remove the coating prior to measurement i.e. the gauge ignores the coating thickness.
<b>High Speed Scan Mode</b>	Identifies the minimum thickness point over a large area by moving the transducer over the surface. While the transducer is in contact with the material being measured the smallest value is held in memory and displayed when scanning is complete.
<b>PLAS Mode</b>	Specifically for use when measuring thin plastics. Please note that to use this mode, a special Graphite Delay Line must be purchased, Part Number T92016871.
<b>Differential Mode</b>	Displays the positive or negative difference between a pre-set nominal (target) thickness value and the actual measured value.
<b>Alarm Mode</b>	Allows the user to set a target so that an audible and visual alarm operates when taking measurements. If the measurement falls below a pre-set nominal (target) value a red LED will light and the bleeper sounds. A green LED will light to indicate an acceptable thickness.
<b>Data Output</b>	Allows the user to send data direct to a printer or PC.
<b>Data-Logging</b>	A storage capacity of 1000 measurements – 10 files consisting of 100 sequential storage locations. Allows the user to send data direct to a printer or PC.
<b>EDTS<sup>+</sup> Excel link Software</b>	PC data transfer utility including generator of ASCII files and “data drop” add in for Microsoft Excel™ spreadsheets.
<b>ElcoMaster™ Software</b>	Stand alone data management program with advance facilities for archiving, reporting, analysis and data export.

## Related products



Elcometer 204

The Elcometer 204 Steel Ultrasonic Thickness gauge is a handheld gauge providing fast and accurate measurements of the thickness of steel. The principal advantage of ultrasonic measurement over traditional methods is that ultrasonic measurements can be performed with access to only one side of the material being measured.



Elcometer 205/6

These robust, hand held instruments are used for measuring the thickness of materials where access to only one side of the test piece is available. Many different materials can be measured including steel, cast iron, plastic, epoxy resin and glass fibre, etc.



Elcometer 207

Elcometer's series of precision ultrasonic thickness gauges are designed to provide accurate measurements on thin materials. Using the latest transducer designs the Elcometer 207 gauges will measure thin materials in one mode and then automatically switch to another mode when measuring thicker materials and plastics.

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