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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 not-destructive tests.

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

Description	Elcometer 208	Elcometer 208DL
Echo-to-Echo Mode	●	●
High Speed Scan Mode	●	●
Alarm Mode	●	●
Data Output	●	●
Data Logging		●
EDTS⁺ Excel Link Software	o	●
ElcoMaster™ Software	o	●
Part Number	C208- - - -1	C208DL- - - -1

Accessories		
	5MHz High Damped Transducer - For steel applications	T92016967
	7.5MHz High Damped Transducer - Aluminium, stainless steel and titanium applications	T92016968
Accessories	Ultrasonic Couplant (120ml / 4oz)	T92015701
	High Temperature Ultrasonic Couplant (60ml / 2oz)	T92015874
	Test Wedge 2-25mm	T9205243-
	Test Wedge 30-100mm	T9205270-

Packing List	
Packing List	***Elcometer 208:*** Elcometer 208 Gauge, Bottle of couplant, Batteries, Carrying case & Operating instructions
	Elcometer 208DL: Elcometer 208DL Gauge, Bottle of couplant, CD with data transfer and data collection software, Data transfer cable, Batteries, Carrying case & Operating instructions

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.
 ● = Included   o = Optional

ULTRASONIC TRANSDUCER SELECTION TABLE FOR ELCOMETER 205, 206, 206DL, 208, 208DL

Measurement Range (in steel) mm / inches	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	Part Number	Frequency MHz (Colour Code)	Crystal Diameter mm / inches	Wearface Diameter mm / inches
3.8 – 50.8 / 0.15 – 2.0	•	•	•						•	•						T92015620	1.0 (brown)	12.7 / 1/2	15.88 / 5/8
	•	•	•						•		•					T92015621			
	•	•	•							•		•				T92015622			
	•	•	•								•	•				T92015623			
1.5 – 101.6 / 0.06 – 4.0	•	•		•					•	•						T92015626	2.25 (red)	6.35 / 1/4	9.53 / 3/8
	•	•		•					•		•					T92015627			
	•	•		•						•		•				T92015628			
	•	•		•							•	•				T92015629			
	•	•		•					•	•			•			T92015631			
	•	•		•							•	•	•			T92015632			
1.5 – 127.0 / 0.06 – 5.0	•	•		•					•	•						T92015633	2.25 (red)	12.7 / 1/2	15.88 / 5/8
	•	•		•					•		•					T92015634			
	•	•		•						•		•				T92015635			
	•	•		•							•	•				T92015636			
	•	•		•					•	•			•			T92015637			
	•	•		•							•	•	•			T92015638			
1.5 – 50.8 / 0.06 – 2.0					•	•	•		•	•						T92015641	5.0 (green)	4.76 / 3/16	6.35 / 1/4
					•	•	•		•		•					T92015642			
					•	•	•				•	•				T92015644			
1.02 – 152.4 / 0.04 – 6.0					•	•	•		•	•						T92015645	5.0 (green)	6.35 / 1/4	9.53 / 3/8
					•	•	•		•		•					T92015646			
					•	•	•			•		•				T92015647			
					•	•	•				•	•				T92015648			
					•	•	•		•	•			•			T92015655			
					•	•	•				•	•	•			T92015656			
1.27 – 507.7 / 0.05 – 19.99					•	•	•		•	•						T92015657	5.0 (green)	12.7 / 1/2	15.88 / 5/8
					•	•	•		•		•					T92015658			
					•	•	•			•		•				T92015659			
					•	•	•				•	•				T92015660			
					•	•	•		•	•			•			T92015661			
					•	•	•				•	•	•			T92015662			
1.02 – 152.4 / 0.04 – 6.0					•	•	•	•	•	•					•	T92015663	7.5 (grey)	6.35 / 1/4	9.53 / 3/8
					•	•	•	•	•		•				•	T92015664			
					•	•	•	•		•		•			•	T92015665			
					•	•	•	•			•	•			•	T92015666			
0.635 – 152.4 / 0.025 6.0					•	•	•	•	•	•				•		T92015667	7.5 (blue)	6.35 / 1/4	9.53 / 3/8
					•	•	•	•	•		•			•		T92015668			
					•	•	•	•		•		•		•		T92015669			
					•	•	•	•			•	•		•		T92015670			
1.02 – 152.4 / 0.04 – 6.0					•			•	•	•						T92015671	10.0 (white)	6.35 / 1/4	9.35 / 3/8
					•			•	•		•					T92015672			
					•			•		•		•				T92015673			
					•			•			•	•				T92015674			
1.52 – 254.0 / 0.06- 10.0					•			•	•	•						T92015676	10.0 (white)	12.7 / 1/2	15.88 / 5/8
					•			•	•		•					T92015677			
					•			•		•		•				T92015678			
					•			•			•	•				T92015679			

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The Elcometer Ultrasonic Thickness Gauge Features Explained

Interface-to-Echo Mode	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")
Echo-to-Echo Mode	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.
High Speed Scan Mode	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.
PLAS Mode	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.
Differential Mode	Displays the positive or negative difference between a pre-set nominal (target) thickness value and the actual measured value.
Alarm Mode	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.
Data Output	Allows the user to send data direct to a printer or PC.
Data-Logging	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.
EDTS+ Excel link Software	PC data transfer utility including generator of ASCII files and "data drop" add in for Microsoft Excel™ spreadsheets.
ElcoMaster™ Software	Stand alone data management program with advance facilities for archiving, reporting, analysis and data export.

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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.