Introducing the Elcometer 304 & 307 Ultrasonic Thickness Gauges

The Elcometer 304 Ultrasonic Material Thickness Gauge and the Elcometer 307 Ultrasonic Precision Thickness Gauge, accurately measure the thickness of a variety of materials, when only one side is accessible – ideal for monitoring corrosion and erosion.

Unlike the entry level gauge – the Elcometer 204 - which only measures the thickness of uncoated steel; the new Elcometer 304 and 307 are ideal for almost any coated or uncoated material and have a wide range applications - including pipelines, storage tanks, or thin plastic bottles for example – making this range of Elcometer ultrasonic thickness gauges versatile and reliable; providing highly accurate material thickness measurements.

With its easy-to-use menu system, in multiple languages, the Elcometer 304 and 307 thickness gauges can be used straight out of the box, with little or no training required.

The Elcometer 304 is an Ultrasonic Material Thickness Gauge, designed to measure the thickness or sound-velocity of most materials - such as metals, plastics, glass, epoxies, and ceramics. Using a dual element transducer, the Elcometer 304 has the ability to measure the substrate thickness, even when it is coated with up to 2mm of paint, ideal for when you need to measure the thickness of a coated material without damaging the coating.

Unlike the Elcometer 304, which uses dual element transducers, the Elcometer 307 Precision Thickness Gauge uses single element transducers and provides precise, accurate material thicknesses to one hundredth of a millimetre - or one thousandth of an inch - ideal for measuring the thickness of thin uncoated materials, such as steel, titanium and plastic, with pinpoint accuracy. Using a Single Element Transducer and a suitable delay line, it will effortlessly measure thin materials from 0.15mm. In the gauge's Plastic Mode, you can even measure thin plastics up to 5mm.

The Elcometer 304 and Elcometer 307 thickness gauges are designed to work with Elcometer's range of intelligent transducers, which all have automatic probe recognition - so as soon as the transducer is connected to a gauge, the gauge immediately detects what type of transducer you're working with.

If you already have a range of transducers you wish to use which have Lemo Connectors; they can be connected to the Elcometer 304 and Elcometer 307 gauges using a single or dual element transducer adaptor – all you have to do is tell the gauge what transducer you are using.

The Elcometer 304 and Elcometer 307 gauges have user selectable measurement rates of up to 16 readings per second (16 Hertz); ideal for quickly scrubbing across a surface, recording multiple measurements.

If you are measuring large surface areas, switch on the gauge's scan mode, scrub the transducer over the test area, and the gauges will display the average, lowest, and highest thicknesses across the scanned area.

Alternatively, select the differential mode, which displays the last reading, and how much it differs from the user definable nominal value – also known as the target thickness – indicating where the material is thinner or thicker than expected.

With their rugged design, and large colour screen with auto-brightness, the Elcometer 304 and 307 are ideal for any weather conditions.

In addition to displaying the material thickness, these Elcometer ultrasonic gauges have a choice of displays which include user selectable statistics, thickness bar graphs, run charts and much more.

The screen is fully customisable, allowing you to choose what information is displayed in the top or bottom half of the LCD; so the information that you need is on screen at all times.

Once you have defined the high and low limits, whenever a reading exceeds the range, the gauges give you an audio and visual warning, clearly highlighting any problem areas.

The Elcometer 304 and 307 have a range of calibration options; with simple, on-screen instructions that guide you through each method - so it's easy to maintain the gauge's accuracy, at all times.

The calibration methods include:

- 1-point calibration – which uses an uncoated sample of test material of a known thickness;
- 2-point calibration – which uses two uncoated samples of test material of two different and known thicknesses;
- material calibration – which uses the sound-velocity of a material selected from a pre-defined list within the gauge; and
- velocity calibration – which uses the known sound-velocity of the material under test.

You can even programme up to 3 calibration memories, allowing you to select a saved calibration method, without the need to re-calibrate the gauge.

Storing 100,000 readings in up to 1,000 batches, the Elcometer 304 and 307 thickness gauges are extremely powerful. The readings can be transferred to your PC - via USB or Bluetooth - for digital reporting using our free, easy to use software application - ElcoMaster. Alternatively, transfer live readings directly into your Android or iOS mobile device, which adds a GPS coordinate to each reading, letting you map the location of every measurement. With ElcoMaster mobile, your office is wherever you are.

Versatile and incredibly easy to use, the new Elcometer 304 and 307 Ultrasonic Thickness Gauges are the ideal choice for material and precision thickness measurements, whatever your application.

For more information and training on the Elcometer 304 Ultrasonic Material Thickness Gauge, the Elcometer 307 Ultrasonic Precision Thickness Gauge, or any other Elcometer products, visit elcometer.com.