



# Dakota CMX10-DL

## A-Scan Thickness Gauge

Corrosion and Precision  
Thickness Gauge with all new  
features included as standard



- A- and B- scan recording for easy scan review and depth sizing
- Full traceability, and reassurance of inspection quality
- 2nd layer Feature to assess and predict remaining inner liner thickness - Cladding
- Enhanced TCG & BEA, improving detection of porosity, inclusions, and cracks
- Image Collect for repeatable data collection for consistent repeatable part measurement
- FREE DakMaster™ reporting software for fast, simple report creation and sharing
- Mobile DakMaster™ app to capture readings and generate reports instantly in field
- Screen share capability for live demonstration, remote training, and collaboration
- Advanced corrosion tools to highlight complex corrosion types such as pits and cracks
- High precision with delay line probes for accurate measurement of very thin components
- Complex corrosion and thickness measurement with Dual and Single element transducers
- Button and Touchscreen supports operation in any environment

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### ULTRASONIC SPECIFICATIONS

Screen Displayed Range	23.3" (592mm) (steel)
Measurement Modes / Range:	Pulse-Echo (P-E): 0.007" to 58.3" (0.18mm to 1480mm) (probe dependant)
	Thru-Paint: Echo-Echo (E-E): 0.007" to 23.3" (0.18mm to 592mm) (probe dependant)
	Thru-Paint Verify: Echo-Echo Verify (E-EV): 0.007" to 11.7" (0.18mm to 296mm) (probe dependant)
	2nd Layer Thickness (PE2): 0.007" to 58.3" (0.18mm to 1480mm) (probe dependant)
	2nd Layer Thickness Thru-Paint (EE2): 0.007" to 23.3" (0.18mm to 592mm) (probe dependant)
Velocity Range	0.0079 to 0.7874 in/ $\mu$ s / (200 to 20000 m/sec)
Transmitter Pulse	Square
Transmitter Pulse Voltage (peak-to-peak)	50 - 200V (User Adjustable in 1Volt steps)
Pulse Rise Time	<10 ns
Pulse Duration	25 to 250nS (Dependent on probe frequency)
Gain Control	0-74dB in 0.1dB steps features: Time Controlled Gain, Auto80
Frequency Range	1MHz - 20MHz

### PRODUCT FEATURES

Accuracy and Resolution	Resolution: $\pm 0.0001$ " ( $\pm 0.001$ mm) Accuracy: 0.001" ( $\pm 0.01$ mm) or $\pm 1\%$ of Reading (whichever is largest) *@ 5MHz $\frac{1}{4}$ " on Steel.
Min & Max Measurement	(Steel @ 5920m/s) Minimum: 0.007" (0.18mm) Maximum: 23.3" (592mm) (Delay: 0.1" - 35" (-3mm - 888mm))
Calibration Options	Zero, 1 Point, 2 Point, Custom Velocity & Preset Material
Gate Modes	Flank, Zero-Cross, Peak
Number Gates	1-3 Depending on Mode Selected
Filter Settings	Low Pass (10Mhz, 20Mhz, 30Mhz), High Pass (0.5Mhz, 2.5Mhz, 5Mhz) and Broadband
Signal Averaging	1-32 samples - Adjustable
Time Corrected Gain (TCG)	Ramp, Curve (up to 16 points)
Pulse Repetition Frequencies (PRFs)	2KHz
Back Wall Echoe Suppression (BEA)	Yes
V-Path Correction	Automatically corrects for V-path (DakotaNDT transducers only)
DakMaster™ Software	PC Software for Reports, Configurations and Back ups Gauge Updates Via DakMaster™
DakMaster™ Mobile App	Record and Report Instantly via Mobile Device

### TRANSDUCER

Transducer Types	Dual Contact, Single Contact, Single Delay, Angle Beam
Auto Detect and Transducer Set Up	Auto Detect and Transducer Set Up Features

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**Dakota** NDT  
an Elcometer company

### DISPLAY

Display	800 x 480 pixels, Colour, Touchscreen, Graphical, TFT Display
Display Refresh Rate	60Hz (16ms)
Waveform Refresh Rate	20Hz (50ms)
Display and Recall Facilities	Numerical Reading, A-scan, B-scan and Video Recordings can be stored and retrieved in Data logs
A-Scan	Rectified +/-, RF, Full Wave
B-Scan	Timed Includes Recording and Analysis with 2 Curser Measurement
Differential Mode	Automatically calculates difference from nominal
Display Freeze	Freeze Screen and Overlay Signal on Screen
Expanded Gate	Expand signal displayed under gate
Transducer Stability Indicator	Speed 20Hz (50ms)
Display Colour Inversion	A-Scan Sunlight Assist
Brightness Adjust	Manual and automatic screen brightness level adjustment
5 Selectable Display Configurations	A-Scan, Statistics, Live Reading, Grid, Image Collect
Image Collect Library	Part Display Images (Multiple Formats)
Screen Share and Control	Remote Viewing Feature with Control

### MEMORY

Data Output and Storage	USB and Bluetooth LE Data Output. 128MB Internal Storage, up to 32GB with External Memory Card
Log Formats	Sequential, Grid, Recording, Amplitude/Depth Color Option
Screen Capture	On Gauge and Screen view function in DakMaster™
Note Ability	OBSTRUCT to indicate inaccessible, with notes
Full Traceability Feature	Set Up Library, Transducer Library, Calibration Library
Data Log File Format Options	Projects, Folders, Individual Files

### GAUGE SPECIFICATION

Part Number	CMX10-DL
Operation of Gauge Controls	Keypad Only, Touchscreen Only or Keypad & Touchscreen Combined Control
Gauge Dimensions	7.1 x 4.1 x 2.0" (180 x 105 x 50mm)
Gauge Weight	1.92lbs (872g)
Operating Temperature	14°F to 122°F (-10 to 50°C)
Probe Sockets Type(s)	1/2x Lemo-00 1x ODU Smart Port
Power Supply	LI-Ion - Rechargeable Smart Battery or Mains Power Supply
Battery Life	9 to 15 hrs (Dependent on usage)
Ingress Protection (IP)	Dust tight and protected against low power water jets in any direction; equivalent to IP65
Certification	Designed for EN 15317
Warranty	1 year limited
Manufacture	Made in the United Kingdom
Packing List	Dakota CMX10-DL Gauge, Ultrasonic Couplant; 120ml (4fl oz), Power Supply (UK, EU and US) Adapters, Rechargeable Battery, Hand Strap (x1), Extension straps (x2), Screen Protector x 1, USB Cable, Calibration Certificate, User Guide, DakMaster™ download card, Transit Case

# DakMaster™

From inspection to professional reports *at the click of a button*



Dakota **NDT**  
an Elcometer company



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