Dakota NDT
an Elcometer company

Dakota PMX High Penetration Thickness Gauge (HPX DL+)

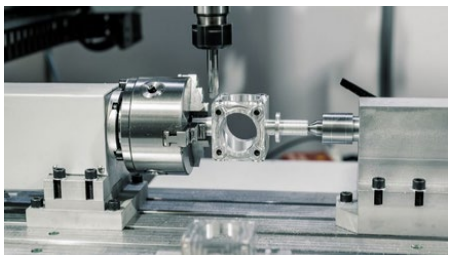
Can be used in accordance with:
NIST & MIL-STD-45662A

The Dakota PMX High Penetration Thickness Gauge is designed specifically for use on materials that are difficult to penetrate sound, due to the lack of material consistency, grain structure, and overall thickness.
The Dakota PMX Precision Thickness Gauge can display the thickness value with A and B-Scan displays, allowing users to accurately assess a wide range of materials.

Features

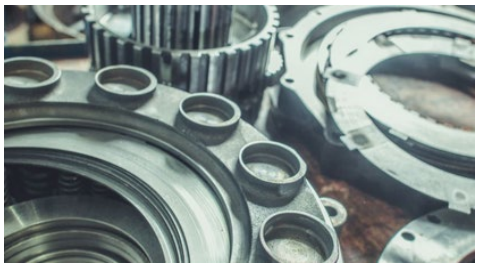
- Multiple high voltage pulser options
- Filters tuned for lower frequency transducers (500 kHz – 10 MHz)
- FPGA-driven electronic platform for speed and accuracy
- Screen refresh rate of 25 Hz for improved responsiveness
- Built-in data logger with grid or sequential file format options
- Internal 4Gb SD card for memory
- USB-C connectivity to standard PCs and Apple devices
- Versatile Dakmaster Software
- Compatible with various materials: fiberglass, carbon fiber, cast metals, rubber, HDPE, FRP, lead, all steels and aluminium
- Typical applications include fiberglass sheets, pipes, storage tanks, aerospace composites, boat hulls, conveyor belts, and composite plastics

Applications


Precision Machining


Stamping


Aircraft


Automotive


Thin Plastics

Product Features

Model	PMX4-DL
Display Mode	
Material thickness digits display	■
B-Scan cross sectional display	■
Combined B-Scan and digits display	■
Scan bar display	■
A-Scan display	+ Rectified, - Rectified, Full Waveform (RF)
Measurement Range	PE contact on steel - 1.27 - 30500mm
	PE Contact on plastics - 2.54 - 127mm
	EE contact on steel - 2.54 - 914.4mm
	EEV contact on steel - 2.54 - 152.4mm
Resolution	+/- 0.1mm, +/- 0.01mm selectable
Measurement Rate	
Manual	8 readings per second
Scan Mode	250 readings per second
Scan bar display	10 to 33 readings per second
Additional Features	
High Speed Scan Mode	■
Limit alarm mode	■
Selectable resolution	■
B-Scan display speed	10 to 200 readings per second
Calibration setups	64 custom user-definable setups, transferable to and from a PC archive
Gates	3 adjustable gates, depending on measure mode selected
Pulser Type	Spike – 200 volt, Square Wave – 400 volt, Tone Burst 400 volt, all adjustable with variable pulse widths and voltage settings
Gain	Manual or Automatic Gain Control (AGC) with 110dB range, varies with mode selected
	Time Dependent Gain (TDG), with variable start and slope
	Adjustable damping (35, 50, 75, 300, 600 & 1500ohms)
Timing	Precision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizer
Memory and Data Logging	4GB internal memory
	Sequential and grid logging
	Alpha numeric batch identification
	OBSTRUCT indicates inaccessible locations
	Bitmap graphic capture and capture viewer
Calibration Options	Single, two-point, velocity and material type
Transducer Probe Type	Single element with delay tip, pencil with delay tip and contact probes
Transducer Frequency Range	500kHz - 10MHz
Transducer Recognition	manual - selectable from a list

Display	1/8” VGA (greyscale), 62 x 45.7mm viewable area
Display Refresh Rate	25Hz
Units (selectable)	mm
LED Backlight	on / off / auto
Repeatability / Stability Indicator	■
Low Battery Indicator	

Technical Specification

Part Number	Description	Certificate
Z-225-0002	Dakota PMX4-DL High Penetration Thickness Gauge (HPX DL+)	●
Operating Temperature	-10 to 60ºC	
Power Supply	3 x AA batteries and via USB	
Battery Life	Alkaline: greyscale 35 hrs	
	Nicad: greyscale 10 hrs	
	NI-MH: greyscale 35 hrs	
Gauge Weight	383g - including batteries	
Gauge Dimensions	63.5 x 165 x 31.5mm	

● Certificate of Calibration supplied as standard

Packing List

Dakota PMX High Penetration Thickness Gauge
Custom 1” Delay Line Transducer (Rubber Delay Line) & Cable
Couplant
Manual
Plastic Carrying Case
Certificate of Calibration
AA Batteries
PC Software
Data Transfer Cable

Part Numbers

Dakota PMX4-DL High Penetration Thickness Gauge

Part Number: Z-225-0002

Accessories

Part Number	Description
N-003-0330	USB-C to USB TYPE A 1m Data Cable