

# Dakota PMX Precision Thickness Gauge (PMX)

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



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 and offering selectable resolutions of either 0.01mm or 0.001mm.

The Auto-Find feature locates the detection point(s) and adjusts the display settings to bring the waveform into view. The high-speed scan feature on the Dakota PMX thickness gauge speeds up the inspection process by taking 250 measurements per second. Remove the transducer from the test material and it will display the minimum measurement scanned.

## Key Features

### Accuracy

Flexible & easy to use, the Dakota PMX Precision Thickness Gauge is able to measure the thinnest point of the substrate with maximum precision. This allows it to measure thin materials with pinpoint accuracy

### Powerful

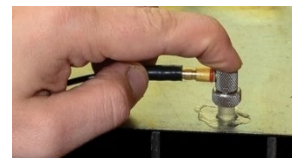
Up to 4GB of readings and waveforms can be saved into the gauge memory as each measurement is taken, which can be downloaded later into an inspection application or into DakMaster Software for further analysis and reporting.

### Intelligent

Limits can be set on the Dakota PMX Thickness Gauge for individual readings or for each batch with audible & visual alarms. This makes it easy to identify pass/fail limits

### Customisable

With a choice of display modes, the user can select the most appropriate option for their needs; Readings, Selected Statistics, Bar Graph, Run Chart & Differential Mode



## Applications



Precision Machining



Stamping



Aircraft



Automotive



Thin Plastics

## Product Features

Model	PMX2-DL	PMX3-DL
<b>Display Mode</b>	■	■
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)	+ Rectified, - Rectified, Full Waveform (RF), Landscape View
Measurement Range	PE contact on steel - 1.00 - 9144mm IE on steel - 1.27 - 25.4mm IE on plastic - from 0.127mm EE contact on steel - 2.54 - 914.4mm IEE on steel - 0.152 - 12.7mm EEV contact on steel - 2.54 - 152.4mm	PE contact on steel - 1.00 - 9144mm IE on steel - 1.27 - 25.4mm IE on plastic - from 0.127mm EE contact on steel - 2.54 - 914.4mm IEE on steel - 0.152 - 12.7mm EEV contact on steel - 2.54 - 152.4mm
Resolution	0.01mm , 0.001mm selectable	0.01mm, 0.001mm selectable
<b>Measurement Rate</b>		
Manual	8 readings per second	8 readings per second
Scan Mode	250 readings per second	250 readings per second
Scan bar display	10 to 33 readings per second	10 to 33 readings per second
<b>Additional Features</b>		
High Speed Scan Mode	■	■
Limit alarm mode	■	■
Selectable resolution	■	■
B-Scan display speed	10 to 200 readings per second	10 to 200 readings per second
Calibration setups	64 custom user-definable setups, transferable to and from a PC archive	64 custom user-definable setups, transferable to and from a PC archive
Gates	3 adjustable gates, depending on measure mode selected	3 adjustable gates, depending on measure mode selected
Pulser Type	Square wave pulser with adjustable pulse width (spike, thin, wide)	Square wave pulser with adjustable pulse width (spike, thin, wide)
Gain	Manual or Automatic Gain Control (AGC) with 110dB range, varies with mode selected Adjustable damping (35, 50, 75, 300, 600 & 1500ohms)	Manual or Automatic Gain Control (AGC) with 110dB range, varies with mode selected Adjustable damping (35, 50, 75, 300, 600 & 1500ohms)
Timing	Precision TCXO timing with single shot 100 MHz 8 bit ultra-low power digitizer	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	4GB internal memory Sequential and grid logging Alpha numeric batch identification

	OBSTRUCT indicates inaccessible locations	OBSTRUCT indicates inaccessible locations
	Bitmap graphic capture and capture viewer	Bitmap graphic capture and capture viewer
Calibration Options	Single, two-point, velocity and material type	Single, two-point, velocity and material type
Transducer Probe Type	Single element with delay tip, pencil with delay tip and contact probes	Single element with delay tip, pencil with delay tip and contact probes
Transducer Frequency Range	1 - 25MHz	1 - 25MHz
Transducer Recognition	manual - selectable from a list	manual - selectable from a list
Display	1/8" VGA (greyscale), 62 x 45.7mm viewable area	1/4 VGA AMOLED colour display 57.6 x 43.2mm viewable area
Display Refresh Rate	25Hz	25Hz
Units (selectable)	mm	mm
LED Backlight	on / off / auto	on / off / auto
Repeatability / Stability Indicator	■	■

## Technical Specifications

Part Number	Description	Certificate
Z-307-0002	Dakota PZX1 Precision Thickness Gauge (PZX-7)	●
Z-308-0002	Dakota PZX1-DL Precision Thickness Gauge (PZX-7 DL)	●
Operating Temperature	-10 to 60°C	
Power Supply	2 x AA batteries	
Battery Life	Alkaline – 35 hrs, Nicad – 18 hrs	
Gauge Weight	312g - including batteries	
Gauge Dimensions	63.5 x 131 x 31.5mm	

- Certificate of Calibration supplied as standard.

## Packing List

Dakota PZX Precision Thickness Gauge
Standard 1/4" Delay Line Transducer (2 Delay Tips – 3/8" & 1/2" L) & Cable
Couplant
Manual, Certificate of Calibration
AA Batteries, Plastic Carrying Case

## Part Numbers

Dakota PMX2-DL Precision Thickness Gauge (PVX)



Part Number: Z-157-0006

Dakota PMX3-DL Precision Thickness Gauge (PVX Colour)



Part Number: Z-157-0007

## Accessories

Part Number	Description
N-306-0010	1.8m RS232 (DB-9 to Lemo )
N-402-0510	USB to Serial Adapter