

# Dakota PCX Precision Thickness Gauges (PTG)

Can be used in accordance with: EN 14127, EN 15317



When pinpoint accuracy is the key, the variety of features offered in the Dakota PCX Precision Thickness Gauge allows users to measure with precision on thin materials. The Dakota PCX Precision Thickness Gauge range comes with all the features and functionality necessary for precisely measuring material thickness on virtually any material.

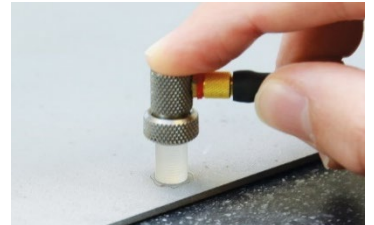
## Key Features

- Interface Echo (I-E) Echo-Echo (E-E) & Plastic Mode (PLAS) measurement modes
- Measurement range from 0.15mm to 25.40mm
- 2-Point, 1-Point, Material & Factory Calibration options
- Three user programmable calibration memories
- User selectable measurement rate; 4, 8, 16 readings per second
- User selectable reading resolution; 0.1mm or 0.01mm
- Scan Mode
- Readings, selected statistics, Bar Graph, Run Chart, B-Scan & Differential Mode
- Gauge memory; stores up to 100,000 readings in up to 1,000 sequential or grid batches
- User definable upper and lower limits with audible & visual pass/fail warnings
- USB and Bluetooth data output to DakMaster

## Applications

### Accurate

Flexible & easy to use, the Dakota PCX Precision Thickness Gauge has a measurement range from 0.15mm to 25.40mm with up to  $\pm 1\%$  accuracy, across three measurement modes; Interface Echo (IE), Echo Echo (EE) & Plastic mode (PLAS).



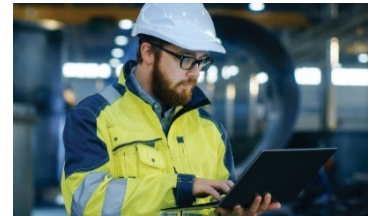
### Powerful

Up to 100,000 readings can be saved into the gauge memory as each measurement is taken, which can be downloaded later into an inspection application or into DakMaster for further analysis and reporting.



### Wireless Connectivity

Connect the Dakota PCX Precision Thickness Gauge via Bluetooth or USB to a PC & download the data into an inspection application or into DakMaster Software for instant report generation and seamless technological integration.



## Summary



### User Definable Upper and Lower Limits

The Dakota PCX Precision Thickness Gauge has user definable upper and lower limits with audible and visual pass/fail warnings allowing the user to compare readings to predefined values.

The Dakota PCX Precision Thickness Gauge can store up to 40 pre-programmed limits which can be set for individual readings or for each batch. If a measurement is taken which falls outside set limits, the reading value and the limit icon turn red, the red LED flashes and the alarm beeps providing immediate indication of problem areas.



### Calibration Options

The Dakota PCX Precision Thickness Gauge has many calibration options including 1-Point & 2-Point method and Velocity. Alternatively, the user can select one of 39 pre-set materials stored within the gauge including; aluminium, steel, stainless steel, cast iron, plexiglass, PVC, polystyrene and polyurethane.

The Dakota PCX Precision Thickness Gauge allows users to store into memory up to three calibrations. Once saved, the user can select a calibration without the need to re-calibrate the gauge. Using the gauge's alpha-numeric function, calibration memories can be re-named to suit the calibration setting.



### Customisable

The Dakota PCX Precision Thickness Gauge has a choice of display modes allowing the user to select the most appropriate for their needs; Readings, Selected Statistics, Bar Graph, Run Chart & Differential Mode.



### Measurement Modes

Interface Echo (IE): Suitable for measurement of materials between 1.65mm and 25.4mm thick.

Echo Echo (EE): Suitable for measurement of materials between 0.15mm and 10.15mm thick.

Plastic Mode (PLAS): Suitable for very thin plastics between 0.15mm and 5mm thick.

## Product Features

Model	PCX8-DL
Easy to use menu structure in multiple languages	■
Waterproof and dust resistant equivalent to IP64	■
Bright colour screen with permanent backlight	■
Ambient light sensor, with adjustable brightness	■
Scratch and solvent resistant display; 6cm TFT	■
Large positive feedback buttons	■
USB power supply; via PC	■
Gauge software updates <sup>1</sup> via DakMaster Software	■
2-year gauge warranty <sup>2</sup>	■
Limits: 40 audible & visual pass/fail warnings	■
<b>Measurement Mode</b>	
Echo Echo (E-E)	■
Interface Echo (I-E)	■
Plastic Mode (PLAS)	■
<b>Measurement Rate</b>	
4, 8, 16Hz	4, 8, 16Hz <sup>3</sup>

<b>Thickness Range<sup>4</sup></b>	
E-E 0.15 - 10.15mm	■
I-E 1.65 - 25.40mm	■
PLAS 0.15 - 5.00mm	■
<b>Measurement Units</b>	
mm	■
m/s	■
Repeatability / Stability Indicator	■
<b>Display Mode</b>	
Reading	■
Selected statistics	■
Scan thickness bar graph	■
Readings and Differential	■
Run Chart	■
B-Scan cross sectional display	■
<b>Selectable Reading Resolution</b>	
Lo; 0.1mm, 10m/s,	■
Hi; 0.01mm, 1m/s,	■
<b>Statistics</b>	
Number of readings, n; Mean average, $\bar{x}$ ; Standard deviation, $\sigma$ .	■
Lowest reading, Lo; Highest reading, Hi	■
Low / high limit value	■
Reading Range Value	■
Nominal Value	■
Number of readings below low limit	■
Number of readings above high limit	■
<b>Calibration Options</b>	
Zero (using the integral zero disc)	■
1 - point	■
2 - point	■
Material selection; 39 preset materials	■
Factory; resets to the factory calibration	■
Velocity (speed of sound)	■
Known thickness value	■
<b>Calibration Features</b>	
Calibration lock; with optional PIN Lock	■
Test calibration feature	■
Calibration memories: 3 programmable memories	■
Measurement outside calibration warning	■
<b>Data Logging</b>	
Number of readings	100
Number of batches	1
Sequential batching	■
Grid batching	■
Fixed Batch Size Mode; with batch linking	■
Obstruct entry; add 'obst' into grid location	■
Delete last reading	■
Date & time stamp	■
Review, clear & delete batches	■
Display Mode	■
Alpha numeric batch names; user definable	■
Batch review graph	■
<b>Data Output</b>	
USB to PC	■
Bluetooth to PC, Android & iOS devices	■
DakMaster software	■
<b>Transducer Probe Type</b>	
Single Element	■
Auto transducer recognition	■

## Technical Specifications

Part Number	Description	Certificate
PCX8-DL	Dakota PCX8-DL Precision Thickness Gauge	●
<b>Measurement Range<sup>1</sup></b>		
Interface Echo (IE)	1.65 - 25.40mm	
Echo Echo (EE)	0.15 - 10.15mm	
<b>Measurement Accuracy<sup>2</sup></b>		
Plastic Mode (PLAS)	0.15 - 5.00mm	
Interface Echo (IE)	±0.015mm (1.65-2.99mm), ±0.5%(3.00-25.4mm)	
Plastic Mode (PLAS)	±0.015mm (0.15-2.99mm), ±0.5% (3.00-5.00mm)	
Operating Temperature	-10 to 50°C	
Power Supply	2 x AA batteries	
Battery Life <sup>3</sup>	Alkaline: 15 hours, Lithium: 28 hours	
Gauge Weight	210g - including batteries, without transducer	
Gauge Dimensions	145 x 73 x 37mm, without transducer	

<sup>1</sup> Dependent on material being measured & transducer being used.

<sup>2</sup> On steel.

<sup>3</sup> Approximate battery life in Continuous Reading Mode with reading rate of 4Hz. Rechargeable batteries may differ.

● Calibration Certificate supplied as standard.

## Packing List

Dakota PCX8-DL Ultrasonic Precision Thickness Gauge
15MHz transducer (TXC15M0CM)
Couplant
3 x Screen Protectors
Wrist Harness
AA Batteries
Plastic Carrying Case
Certificate of Calibration
USB Cable
DakMaster Software (from website)
Operating Instructions

## Part Numbers

Dakota PCX8-DL Precision Thickness Gauge



Part Number: PCX8-DL

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