

Dakota FX81-DL Benchtop Flaw Detector (DFX-8+)

Can be used in accordance with: NIST & MIL-STD-45662A, EN12668-1 compliant.



The Dakota FX81-DL Bench Top Flaw Detector combines state-of-the-art flaw detection with advanced material thickness capabilities.

The Dakota FX81-DL Ultrasonic Flaw Detector, designed for laboratory use, is a high-performance tool tailored for precise flaw detection. It features Time Corrected Gain (TCG), which automatically compensates for sound attenuation in materials to enhance measurement accuracy. The gauge includes grid batching functionality, allowing users to mark "OBSTRUCT" on the grid to easily identify inaccessible measurement locations.

With 6GB of internal memory and an external SD slot supporting up to 64GB, it offers robust data storage, complemented by full data logging capabilities via RS232 output to DakMaster™ data management software. This makes the FX81-DL an efficient and reliable solution for laboratory-based flaw detection tasks.

Key Features

- Blankview sunlight readable QVGA TFT colour display
- Sizing Toolkits: DAC, AWS, TCG, DGS
- Pulse Repetition Frequency: 8 to 333 Hz, adjustable
- Screen Refresh Rate: 60Hz
- Detection: Z-Cross, Flank & Peak
- Automatic: probe zero, probe recognition, and temperature compensation
- Measurement: Variety of modes to address a number of applications
- Large data storage: 6Gb internal & up to 64Gb external SD slot
- Multiple formats: Alpha numeric grid and sequential with auto identifier
- Up to 12 hours of battery life
- Download to DakMaster data management software

Product Features

Measurement Modes (Dual Element)

Pulse-Echo Mode (P-E)	Application: Pit & Flaw Detection Range: 0.63 mm to 3048 cm
Pulse-Echo Coating Mode (PECT)	Application: Material, Coating, Pit & Flaw Detection Material Range: 0.63 mm to 3048 cm Coating Range: 0.01 to 2.54 mm
Pulse-Echo Temp Comp Mode (PETP)	Application: Pit & Flaw Detection with Auto Temperature Compensation Range: 0.63 mm to 3048 cm

Echo-Echo Mode (E-E)	Application: Thru Paint & Coatings Range: 1.27 to 102 mm, varies based on coating
Echo-Echo Verify Mode (E-EV)	Application: Thru Paint & Coatings Range: 1.27 to 25.4 mm, varies based on coating
Coating Only Mode (CT)	Application: Coating Thickness Range: 0.0127 to 2.54 mm, varies based on coating
Calibration & Features	
Calibration	One and two-point calibration for material and coating, or selection from basic material types
Probe Features	Auto probe zero, recognition, and temperature compensation
High Scan Speed	Up to 50 readings per second
Limits	Audible hi/lo limit alerts
Differential Mode	Built-in for quality control inspections
Custom Setups	64 user-configurable setups
Transducer Types	
Delay Line	High-frequency single element for precision testing of thin materials
Pencil	High-frequency single element for tight access areas and complex geometries
Contact	Single element for general-purpose longitudinal and shear wave flaw detection
Dual	Pitch/Catch dual element for longitudinal and shear wave corrosion inspections
Power Source	Lithium-ion pack: 10.8V, 2 Ah, ~18 hours operation Emergency Battery Backup

Technical Specification

Part Number	Description	Certificate
Z-251-0001	Dakota FX81-DL Benchtop Flaw Detector (DFX-8+)	●
Operating Temperature	-10 to 60°C	
Power Supply	6 x AA batteries and via USB	
Battery Life ²	Alkaline (12hrs), Nicad (5hrs), and NI-MH (12hrs)	
Gauge Weight	2.04kg - including batteries	
Gauge Dimensions	216.0 x 165.0 x 70.0mm	

- Certificate of Calibration supplied as standard

Packing List

FX81-DL Benchtop Flaw Detector
Selectable Transducer
Couplant
Plastic Carrying Case
Certificate of Calibration
Manual
AA Batteries
Power Cable
PC Software
Data Transfer Cable