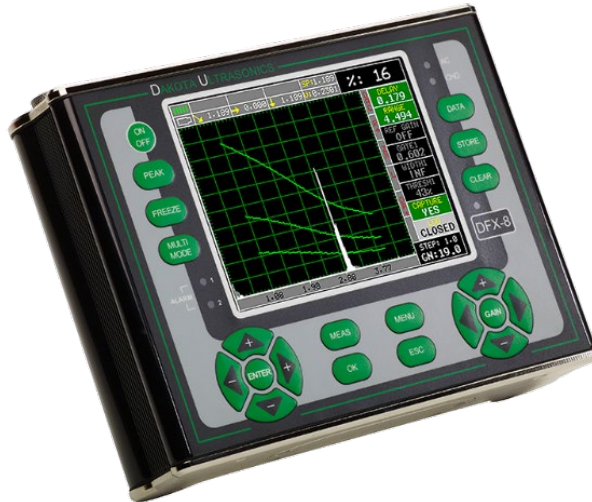


Dakota FX80 Flaw Detector (DFX-8)

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



The Dakota FX80 Bench Top Ultrasonic Flaw Detector is available in two models: Dakota FX80-DL Bench Top Flaw Detector and Dakota FX81-DL Bench Top Flaw Detector. The time corrected gain (TCG) feature automatically compensates for sound attenuation through a material, further increasing the performance of the gauge.

Key Features

- Blanview 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
- Versatile and reliable

Product Features

Model	FX80-DL & FX81-DL
Display Mode	
Material thickness digits display	■
B-Scan cross sectional display	■
B-Scan with digits display	■
Scan bar display	■
Coating thickness display	■
A-Scan display	+ Rectified, - Rectified, Full Waveform (RF)
Flaw Detection Modes	TRIG, DAC, AWS, TCG, AVG/DGS
Measurement Range	P-E: Pulse Echo (Dual Contact): 0.630 - 2,440mm Pulse Echo (Single Contact): 1.000 - 30,480mm E-E: Echo Echo ThruPaint (Dual Contact): 1.270 - 102mm Echo Echo (single delay line) : 0.178 - 25.4mm Echo Echo (single contact) : 1.000 - 3,050mm Echo Echo Verify (EEV): 1.270 - 25.4mm

	PETP:
	Pulse Echo Temp Comp: 0.630 - 2,440mm
	CT:
	Coating Thickness: 0.013 - 2.54mm
	PECT:
	Pulse Echo Coating Thickness (Coating) 0.010 - 2.54mm
	Pulse Echo Coating Thickness (Substr.) 0.630 - 2,440mm
	0.01mm, 0.001mm selectable
Resolution	
Measurement Rate (Thickness Mode)	
Manual	4 readings per second
Scan Mode	32 readings per second
Scan bar display	6 readings per second
High Speed Scan Mode	■
Differential Mode	■
Limit alarm mode	■
B-Scan display speed	adjustable display speed
Calibration setups	64 user-definable setups transferrable to and from a PC archive
Gates	2 (flaw) and 3 (thickness) adjustable gates: start, stop, width & threshold
Damping	50, 75, 100, 300, 600, & 1500 ohms
Pulser type	FX80-DL: Two adjustable square wave pulsers, 100 - 200v FX81-DL: Two tone burst pulsers, 100 - 400v
Gain	Manual, automatic gain control (AGC) with 110dB range with 0.2dB resolution
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
Data Output	USB-C
Calibration Options	single, two-point, velocity, material type
Transducer recognition	Automatic
V-path / dual path error correction	Automatic
Probe Zero	Automatic
Automatic Calibration	Longitudinal (straight), or Shear (angle)
Flaw Detection Product Features	
Probe Types	Single Contact, Dual, Delay & Angle
Material Velocity Table	Contains longitudinal and shear velocities for a variety of material types
TRIG	Trigonometric display of beam path, depth, surface distance, and curved surface correction. Used with angle beam transducers
DAC	Up to 8 points may be entered and used to digitally draw a DAC curve. Reference -2, -6, -10, (-6/-12), (-6/-14), (-2/-6/-10) dB. Amplitude displayed in %DAC, dB, or %FSH
AWS	Automatic defect sizing in accordance with AWS D1.1 structural welding code.
AVG/DGS	Automatic defect sizing using probe data. Stores up to 64 custom setups
TCG	Time corrected gain. 50 dB dynamic range, 20 dB per microsecond up to 8 points for curve definition
Detection Modes	Zero Crossing, Flank and Peak
Display Freeze	Hold current waveform on screen
Peak Memory	Captures peak signal amplitude
PRF	8 to 2000Hz in selectable steps (8, 16, 32, 66, 125, 250, 333, 1000, 2000Hz)
Skip Bar	Displays skip legs in the waveform area
Pulse Width	40 to 400 ns. Selectable step options 40, 80 & 400 ns (labeled spike, thin & wide)
Frequency Bands	FX80-DL & FX81-DL:

Broadband 1.8 - 19MHz (-3dB)

FX81-DL:

Six narrow bands at:

0.5MHz, 1MHz, 2MHz, 5MHz, 10MHz, 15MHz.

Horizontal Linearity	+/- 0.4% FSW
Vertical Linearity	+/- 1% FSH
Amplifier Linearity	+/- 1 dB
Amplitude Measurement	0 to 100% FSH, with 1% resolution
Delay	25,375mm at steel velocity
Display	Blanview sunlight readable QVGA TFT colour display. 115.2 x 86.4mm viewable screen
Display Refresh Rate	60Hz
Units (selectable)	mm
Backlight	adjustable brightness
Repeatability / Stability Indicator	■
Low Battery Indicator	■
Battery Save Mode	Auto

Technical Specification

Part Number	Description	Certificate
Z-250-0001	Dakota FX80-DL Benchtop Flaw Detector (DFX-8)	●
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

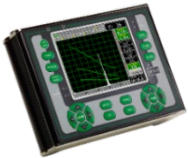
Packing List

Dakota FX80-DL or FX81-DL Benchtop Flaw Detector
Selectable Transducer
Couplant
Plastic Carrying Case
Certificate of Calibration
Manual
AA Batteries
Power Cable
PC Software
Data Transfer Cable

Part Numbers

Dakota FX80-DL Benchtop Flaw Detector (DFX-8)

Part Number: Z-250-0001



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

Part Number: Z-251-0001

