MIZ-21C

Delivering an Inspection Advantage

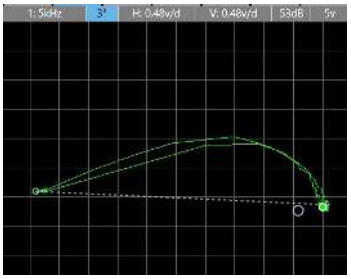
ZETEC
THE INSPECTION ADVANTAGE

Category	Feature	MIZ-21C	Nortec-600	MIZ-21C Advantages
Instrument Form Factor	Size	267 × 122 × 38 mm (10.5 × 4.8 × 1.5 in)	236 x 167 x 70 mm (9.3 x 6.57 x 2.76 in)	• Smaller: Makes one handed control possible
	Weight	1.2 kg (2.6 lb)	1.7 kg (3.75 lb)	• Lighter: Reduces user fatigue
	Ergonomics	Single-hand operation with ambidextrous controls	Need two hands to operate, has limited ambidextrous controls	• Easier to perform inspections in difficult to reach areas
	Touchscreen	✓	✗	• Intuitive: Easier and faster to use
	Eddy Current Array	✓	✗	• Wider coverage for faster inspections • Provides 3D view of data • Better assists flaw morphology
Eddy Current Technology	Gain	10 dB to 123 dB	0 dB to 100 dB	• Greater ability to use digital gain which increases resolution while maintaining signal to noise and preventing probe saturation
	Drive voltage	Up to 12 Vpp (19 Vpp for ECA) in 0.1 volt increments	3 settings: Low(2V)/ Med(5V)/High(8V)	• Higher voltage for increased probe sensitivity and higher signal to noise ratio • Ability to set any voltage for fine tuning of a probe
	Signal to noise (1 Ω Impedance change signal)	40:1	5:1	• Higher data resolution • Increase probability of detection
	Independent filter settings/frequency	✓	✗	• Configure each channel separately to find exactly what you are looking for
C-Scan/Waterfall	High resolution, color C-scans	✓	✗	• Easily identify different layers for bolt hole inspections • Easily see flaws • Increase probability of detection
Signal Calibration	Buffer to review and calibrate data	✓	Freeze function to freeze screen image. Gain and angle adjustments will alter the image to estimate the effect.	• Very accurate signal calibration • Adjust filters and evaluate the effect on the signal • Adjust calibration parameters without the need to continuously scan data
Storage	Ability to store data files	60 s or 10 meters	Only whatever is on the screen at the current time	• Save data for analysis or for archival purposes • Storage buffer enables inspection completion by a single technician

Signal to Noise Ratio Comparison

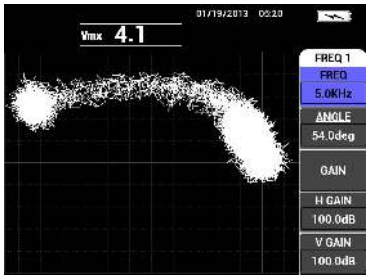
For a given change in impedance, the MIZ-21C has a significantly higher signal to noise ratio. This is due in part to the fact that the MIZ-21C does not require as much gain as the Nortec 600. The example to the right is a 1 Ω signal (lift-off) across 10 divisions. The Nortec 600 uses 100 dB of gain and the MIZ-21C uses just 53 dB of gain to produce an equivalent signal. The signal to noise ratio is 5:1 for the Nortec 600 and 40:1 for the MIZ-21C.

1 Ω signal across 10 divisions



MIZ-21C

53 dB Gain
40:1 Signal to Noise Ratio



Nortec 600

100 dB Gain
5:1 Signal to Noise Ratio