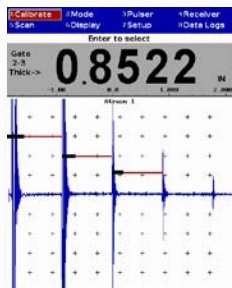
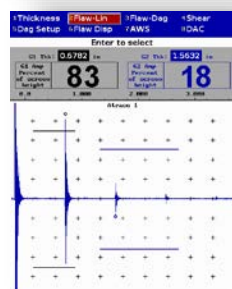


Raptor

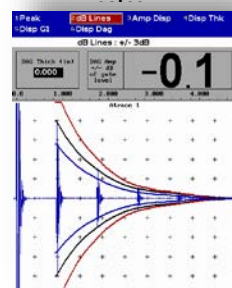
PRECISION ULTRASONIC FLAW DETECTOR



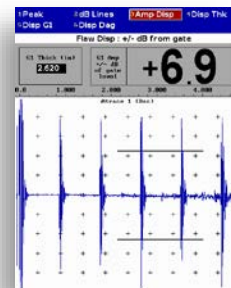
Thickness mode



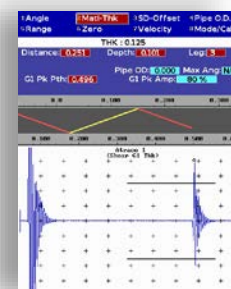
Linear independent flaw



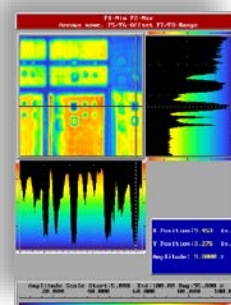
DAC curves (ASME, JIS)



TCG - Time Corrected Gain



Shear mode (flat + curved)



C-Scan + post-processing

Introduction

The Raptor is a high-speed flaw detector, a high-resolution thickness gauge and a versatile and unique imaging system – all in one handheld instrument. B- and C-scan imaging has never been this easy to generate, and helps reducing inspection time along with easy result interpretation.

Applications

- High-end ultrasonic flaw detection
- C-Scan imaging capabilities
- Metals, plastics, composites, glass, rubber
- Corrosion mapping from tubes to pressure vessels
- Storage tanks and boilers glass inspection
- Weld inspection per AWS D1.1/1.5 code
- Investment castings turbine blade inspection

Key features

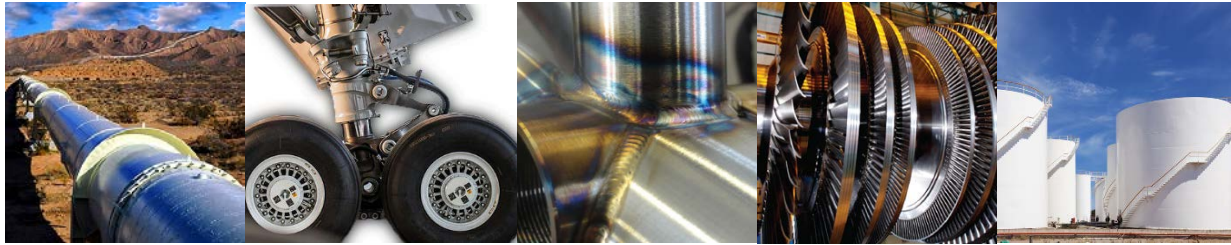
- Spike or Square tunable wave pulser
- 0.5 MHz - 30 MHz receiver
- 25Ω - 375Ω (8 damping levels)
- 10Hz - 5000Hz PRF for high-speed scanning
- Sun readable full VGA display 640 x 480
- 8 hours of battery autonomy
- DAC/TGC incl. JIS, ASME, ASME-3 compliance
- Shear mode for flat or curved surfaces (CSC)
- AWS calculations as per D1.1/1.5 code
- Imaging view: B/C-scan, spreadsheet, 3D, histogram
- SplitScan view: Display A-Trace and B- or C-scan
- 2GB built-in and 2GB external/removable storage
- Windows based RAPWIN software for post-processing
- Quick and direct access to submenus with F1-8 keys
- Rugged aluminum case with rubber end caps



Raptor



PRECISION ULTRASONIC FLAW DETECTOR



General	Package Display Dimensions Power source Operating temp Storage temp Connector type	Raptor unit, Li-Ion battery, AC charger (110-240V), User manual, COC, Pelican Case Sun readable VGA 60Hz 640 x 480 pixels 3.4in x 4.55in (86mm x 116mm) 5.75in x 9.5in x 3.0in, 5.6lbs 146mm x 241mm x 76mm, 2.54kg Field-replaceable Li-ion battery (autonomy of 8 hours) or AC power 32 F - 122 F (0 °C to 50 °C) -4 F - 140 F (-20 °C to 60 °C) Dual BNC	
Transducer	Type Frequency	Single and dual element Contact, Delay, Immersion, Shear, Through-transmission 0.5 MHz - 30 MHz	
Performance	Resolution Velocity	0.0001 in (0.0025mm) 0.0010 in/us - 1.0000 in/us	
Gates	Thickness gates Linear flaw gates DAC flaw gates Alarm types	IP-1 st , 1 st -2 nd , 2 nd -3 rd IP blocking, IF blocking, IF-1 st blocking, 1 st -2 nd blocking 2 independent linear gates +- dB from gate, % of FSH, % of gate level DAC curve (20-point) +-3dB lines (JIS) +-6dB lines (ASME) -6/-14dB (ASME 3) Auditable and visual Thickness high, low, both Amplitude higher, lower	
Modes	TCG mode Shear wave mode AWS-code mode	TCG (Time Corrected Gain) available in all modes automatic or manual setup Flat plate or pipe (CSC - Curved Surface Correction) All gate types available AWS D1.1/1.5 calculations (A, B, C, D values automatically calculated)	
Pulser/Receiver	Pulse type Pulse width Pulse volts PRF	Spike or Square tunable wave pulser 20ns - 10.000ns (square pulse mode only) 50 to 450V 10Hz - 5000Hz	
Receiver	Gain Damping Tuning Bandwidth Display modes	0 - 100dB (up to 0.1 increments) 25Ω - 375Ω (8 damping levels) BB, 0.5 MHz, 1 MHz, 2.5 MHz, 5 MHz, 10 MHz, 15 MHz Narrow or Wide RF, +HW, -HW, FW	
Storage	Internal External	2GB 2GB SD Card (included)	
Connectivity	PC Software	Windows based RAPWIN software for imaging analysis (included)	
Imaging	Scan type	Time or position encoded B-Scan, position encoded C-Scan	
Scanners	Manual scanners	Armadillo (1-D) StringScan 18x18, 24x24 SlideScan	Motorized Scanners CrosScan RCA-10, 18 Tunnel Scan I, II, III
	Customized scanners	NDT Systems has been involved in many one-off customized scanning solutions	

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