Laser Ultrasound NDT Scanner

3-axis flat-bed scanner unit





NDT scanning system for laser-based, air-coupled ultrasound inspection including flat-bed scanner, measurement electronics, analysis software and computer hardware.

Specifications of scanner unit

Scanning area (XY plane)	530 x 1000 mm or 500 x 530 mm
Z-axis, manually adjustable height	460 mm
Maximum scanning speed	75 mm/s
Step size	0.01 mm to 5 mm
Power supply	110/230V; 50/60Hz

Data acquisition

Input channels	1 or 4x2
Sampling rate	25 MHz @ 14 bit
Input voltage	± 7.5 V @ 50Ω , adjustable 0 dB to 50 dB analog amplifier
Analog input filter	All-pass, high-pass, low-pass
Digital input filter	Inline, switchable during acquisition
Output	Trigger for excitation laser/ thermoacoustic emitter
Trigger signal	Freely programmable pulse sequence

Analysis software

Analysis modes	Time domain/spectral domain/correlation
Time data	A /B/C/D scan
Data display	Mean/maximum/median
Analysis window	1ns to 75 ms
Trigger mode	Compensation of structural artefacts
Image export	JPG/vector graphics
Data export	CSV
Operating system	Windows 10

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