



by **IMG**

**HIGH-END ULTRASONIC DEVICE FOR
AUTOMATED SYSTEMS**

Designed for the ultrasonic inspection of top-quality forged components (turbine discs and shafts), the ultrasonic hardware of Forge one is unrivalled on the market, and its use can be extended to any ultrasonic inspection where the quality of the recorded data is non-negotiable.

Forge One’s unique “multi-parallel” architecture allows the same A-scan signal to be acquired and analysed across up to three completely separate modes, using the same transmission pulse, unlike other instruments which require a separate transmission pulse for each A-scan acquired. Performance in terms of SNR, sensitivity and resolution is of the highest standard.

On the software side, managing calibrations using AVG curves can be done efficiently with just a few clicks of the mouse, starting with established AVG curves, which can also be expanded or customised using specific probes.

The equivalent defect rating (ERS) for an indication is calculated automatically.



MONITORING AND ANALYSIS SOFTWARE

Forge One is an advanced solution for the acquisition, analysis and management of data from ultrasonic control systems used for the inspection of forged components and in automated industrial applications. The software enables the quick and intuitive extraction of ERS data from any graphical view using the handy Rectangle tool, allowing the operator to carry out detailed analyses and immediate checks on areas of interest.

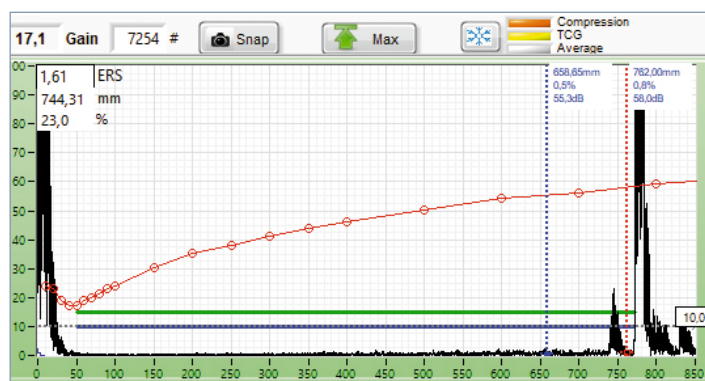
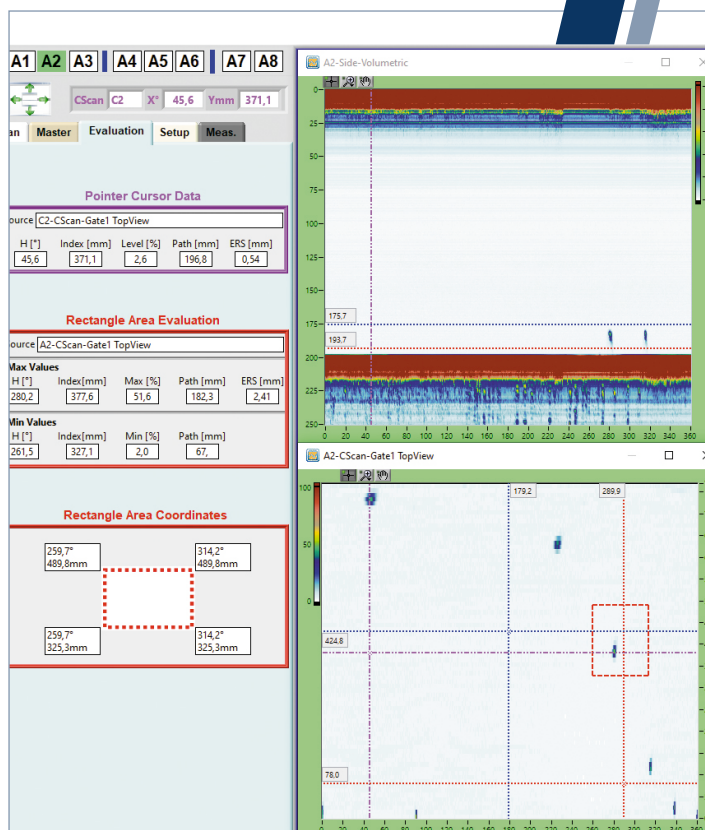
SPECIFIC TECHNICAL FEATURES	
PROBES NUMBER	Up to 3 probes (4 optional), up to 3 A-Scans per probe
SAMPLING	Up to 100 MHz, 12 bit
COMPRESSION	Up to 32, retaining the maximum sample amplitude value
A-SCAN POINTS	Up to 60.000 A-Scan points (optional up to 500.000)
FILTERS	FIR, configurable
PROFIT	88 dB fully analogue
TCG	88 dB fully analogue, slope 40 dB/μs
AVERAGING	From 2 to 64
AVG/DGS	Included with automatic TCG setting based on AVG/DGS data
REGISTRATION	Spiral, helical or raster
GATES	5 independent A-Scan gates
PERFORMANCES	A-Scan, B-Scan, C-Scan, Top view (total or for each gate) Side view and end view (single or slice)
MEASURES	Automatic calculation of the maximum and minimum ERS values using the rectangle tool on each view
COMPLIANCE	ISO-EN 22232-1, ASTM E317-21 etc.

- Top View
- C-Scan
- Side View
- End View
- B-Scan
- A-Scan

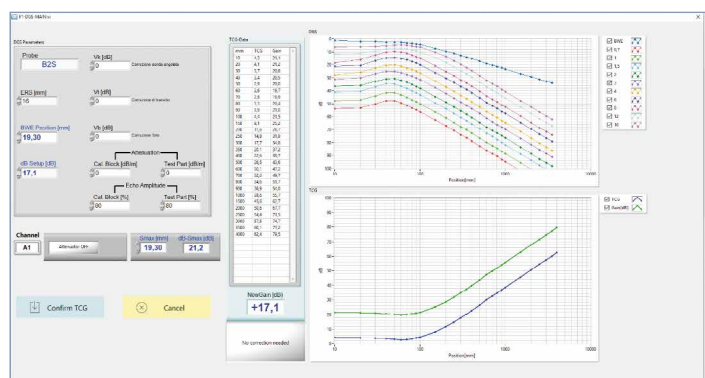
Thanks to its flexible architecture, Forge One can be easily integrated into both new installations and as a retrofit solution for existing systems, extending their lifespan and improving their performance.

The solution is rounded off by the monitoring software developed by IMG Ultrasuoni, designed for plant management, production traceability, process data collection and interfacing with management and industrial automation systems.

- Quick extraction of ERS data from any view
- Advanced analysis using the Rectangle tool
- Comprehensive data display for each gate and channel
- Intuitive and customisable interface
- Integration into new or existing systems
- Ideal solution for revamping and retrofitting projects
- Supervision software developed entirely by IM Ultrasuoni
- High flexibility and customisation options



Visualizzazione A-Scan con accesso diretto alle funzioni.



AVG Calibration Page