



Digital Ultrasonic Flaw Detector C U D

Application

Digital ultrasonic flaw detector CUD is designed for materials and devices testing, thickness measurements and tightness monitoring. Digital structure of flaw detector CUD is highly integrated with modern computers. Software is highly specialized and provides typical applications of CUD and **special objective applications fitted to customers requirements**. Software is constantly evaluated and its new versions are offered to CUD owners.

Ultrasonic flaw detector CUD allows performing **all typical kinds of weld joints examinations** according to standards and procedures.

Flaw detector CUD has high usability.

Helpful CUD features:

- fully automated time base,
- automated flaw evaluation according to OWR-DGS-AVG (European system),
- possibility of creating and using DAC curves for flaw evaluation (American system),
- embedded catalog of ultrasonic probes,
- embedded catalog of tested materials,
- probes calibration,
- possibility of storage many CUD settings (ex. for thickness measurements, for welds testing, etc.) and complete examination results.

Unique CUD features:

- **scanner and map of detected flaws (Sonogram)** – performing automated flaw valuation (ex. according to PN-EN 1712 and 1714 standard), storing complete results of examinations and drawing map of detected flaws – Sonograms, these results can be use ex. For verifying testing that confirms testing credibility,
- **testing of thin welds 2-8 mm** according to IBUS-TD instruction which validation is in accordance with PN-EN ISO/IEC 17025:2005 point 5.4.4.standard, this instruction is complete and it especially is specifying: method of performing, range of welds examination and acceptance criterions, equipment validation and its parameters, testing documentation and associated standards,
- **testing welds made of austenitic steel with small thickness** – with usage of special probe Tandem along with IBUS-TD method, validation of method on calibration block, identical to testing material, provides achieving fully credibility and repeatability of testings,
- **testing of T-joints and angle joints with thickness 1 mm and above** – proper equipment and testing procedure allows testing T-joints and angle joints,
- **co-operation with dynamic data base UltraBase** – possibility of fast automated transferring data (ex. testing results, information about testing, welder etc.) directly do data base UltraBase,
- **possibility of implementation specialized procedures that exploit wide possibilities of CUD flaw detector.**

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Exemplary testings with usage of CUD flaw detector according to standards and procedures:

- welds testing according to PN-89/M-69777 and 70055 standards,
- Welds testing according to PN-EN 1712 and PN-EN 1714 standards,
- welds testing according to Petrobras (Brazil) directives,
- thin welds testing according to IBUS-TD method,
- sheets testing according to BN-74/0601 standard,
- rail axles according to BN-75/3518 standard,
- porcelain insulators testing,
- aluminum cars' rims testing,
- and others.

CUD technical specification:

- dimensions: 186x140x58mm,
- replaceable and rechargeable battery (11,5V 30Ah),
- power supply adapter,
- ~5 hours of work on single battery, no limits with replacing batteries,
- weight (with battery): 1,7 kg,
- screen dimensions: 117 x 88 mm,
- regulated gain: 0...80 dB with 1dB step,
- time base range: 6mm-5m,
- ultrasonic velocity range: 2.0-6.5 km/s,
- probe calibration: delay time, sensitivity,
- ultra bright LCD active display,
- easy handling with only 6 buttons,
- frequency probe range: 0.5-12 MHz,
- splash and dust proof casing,
- LEMO connectors for probes,
- co-operate with Windows 95,98,Me,2000,XP operating systems,
- Communication with computer: LPT or USB,
- embedded: SCANNER, universal DGS diagram, procedure for creating DAC curves,
- probe and material catalog,
- fully automated time base.

