

Measuring principle

Ultrasonic Flaw Detectors generate and display ultrasonic waveforms which can be interpreted by a trained operator to locate and categorize flaws in test pieces. These will typically include an ultrasonic pulser/receiver, hardware and software for signal capture and analysis, a waveform display, and a data logging module.

Applications

Flaw detection can be applied in almost any industry from composites and metals used in aerospace, to petrochemical oil and gas pipelines, storage tanks and power generation including nuclear power. The most common anomalies include cracks, voids and porosity in metals, ceramics and plastics in addition to delaminations and disbonds in composites. Ultrasonic flaw detection has many advantages like access is only required from one side for pulse-echo mode, the depth of penetration is superior to other methods, highly accurate flaw sizing and shape, minimal part preparation and results are in real-time.



Features

- Automated calibration and Automated gain.
- AWS D1.1, DAC (6dB DAC), AVG, TCG & B scan, 28 DGS curves.
- Automated display of precise flaw location (Depth d, level p, distance s, amplitude, sz dB, ϕ).
- Knob design for fast operation.
- Solid metal housing (IP65), rubber plastic dust cover included.
- PC interface.
- Li battery, with working time up to 10 hrs.
- Small size and light weight for portability.
- Automated make video of test process and play.
- 1000 Frames of A-scan Storage.
- High-speed capture and very low noise.
- Lock and unlock function of system parameters and display freeze.
- Automated echo degree.
- Electronic clock and calendar.

Technical Specifications

Model	Metrix+ UTFD 80
Measuring Range(mm)	0 ~ 10000
Vertical Linearity Error	≤3%
Horizontal Linearity Error	≤0.1%

Sensitivity Leavings	≥62dB
Pulse Displacement	≥34dB
Resolving Power	≥36
Frequency Range(MHz)	0.5 ~ 20
Gain(dB)	0 ~ 120
Material Velocity(m/s)	1000 ~ 15000
Measurement Mode	Single, Dual, Through
Reject	0~80%
Pulse Displacement(μs)	-20 ~ +3400
Zero(μs)	0.0 ~ 99.99
Port Type	BNC
Operating Temperature (°C)	-20~50
Size(H×W×D(mm))	210×156×40
Weight(kg)	1.0 (with battery)
Standard configuration	Main body, straight beam probe, angle probe, machine-probe cable, battery module, power adaptor, manual, instrument case, software and USB communication cable.

Pictures

