



Handheld Flaw Detector

The new Panametrics-NDT™ EPOCH LT is the lightest, thinnest flaw detector you've ever seen. This is a handheld digital flaw detector that is just 1.5 inches (38 mm) thick. Packed in a 2.35 lbs (1 kg) package the EPOCH LT gives you a fast display update rate at a minimum 60 Hz, automated transducer calibration, a numeric datalogger, and many other measurement features. The EPOCH LT is the perfect solution when you need to perform quick, basic flaw detection in difficult field conditions or demanding production environments.

The Heavy-Duty Lightweight

Although small in size, the EPOCH LT offers many of the performance features you'd normally expect to find in bulkier flaw detectors. In addition to its fast 60 Hz update rate, the EPOCH LT has a Display Freeze Mode that holds waveform soundpath data, Peak Memory that simultaneously displays live waveform and peak envelope of A-scan, RF display mode, selectable threshold positive/negative or minimum depth Alarm Modes, and Auto Transducer Calibration that calibrates for

transducer zero offset and/or material velocity.

An on-board numeric datalogger is simple to use and can store up to 100 calibrations/2000 thickness measurements. An optional Expanded Memory feature that allows storage of 500 calibrations/10000 thickness measurements. The EPOCH LT datalogger is compatible with files from the other EPOCH 4 series instruments and the GageView™ Pro Interface program.

Extensive Documentation and Transfer Capabilities

The optional Windows®-based GageView Pro Interface program adds practical collection, editing, and review capabilities to the EPOCH LT. GageView Pro is a powerful tool that collects, manages, and formats stored inspection data.

GageView Pro database tracking allows setup of inspection plans with pre-loaded calibrations, IDs, and memos. Data can be printed or easily copied and pasted into word processing and spreadsheet documents for further reporting needs.

Features

- Light, ergonomically designed (2.35 lbs./1.0 kg)
- Large, bright, high-resolution LCD with full/split screen views
- Automated transducer calibration
- Display freeze holds waveform and soundpath data
- Soundpath data viewable in inches, millimeters, or microseconds
- Peak memory feature
- RF display mode
- Alarms, threshold positive/negative, or minimum depth
- Standard DAC and TVG

Software Options

The EPOCH LT's versatility is enhanced by several application-specific software options that can be remotely activated after you have acquired the unit. No need to return the unit to the factory!

- Advanced DAC/TVG
- API 5UE
- Square Wave Pulser
- AWS D1.1 and D1.5
- Onboard DGS/AVG
- Expanded memory
- Low PRF
- Echo-to-Echo thickness measurement
- Extended range
- GageView™ Pro

EPOCH LT Specifications*

Liquid Crystal Display: 320 pixels (W) x 240 pixels (H)

Display Update Rate: Minimum 60 Hz

Sensitivity: 100 dB Max and Reference level sensitivity feature with 6 dB or 0.1 dB selectable resolution

Auto Transducer Calibration: Automated calibration of transducer Zero Offset and/or Material Velocity

Reject: 0% to 80% of full scale in 1% increments

Units: English, Metric, or Microseconds

Material Velocity: 0.025 to 0.6000 in/ μ sec (635 to 15240 m/S)

Range:

- Standard 0.16 inch to 200 inches (4 mm to 5,000 mm)

- Optional 0.038 inch to 400 inches (1 mm to 10,000 mm)

Refracted Angle: Fixed settings of 0°, 30°, 45°, 60°, 70°, or variable from 10° to 85° in 0.1° increments

Peak Memory: Simultaneous display of live A-scan at 60 Hz update rate and peak envelope of A-scan display

Pulsar Type: Negative spike excitation and optional tunable square wave

Pulse Energy: Low (100 V), Medium (200 V), High (300 V), and Max (400 V)

Damping: 50, 63, 150, and 400 Ohms

Rectification: Full Wave, Half Wave Positive or Negative, and unrectified RF settings

Analog Bandwidth:

0.3 MHz to 20 MHz at -3 dB

Test Modes: Pulse Echo, Dual, or Thru-Transmission

Alarms: Selectable threshold positive/negative or minimum depth modes

Operating Temperature:

-10°C to 50°C (14°F to 122°F)

Storage Temperature:

-40°C to 70°C (-40°F to 158°F) depending on battery and display

Power Requirements: AC Mains: 100-120 VAC, 200-240 VAC, 50-60 Hz

Battery: Internal Rechargeable NiMH battery pack rated at 6 V at 3000 mAh

Battery Operating Time: 5-6 hours nominal. 2 hours typical recharge time

Transducer Cable Connectors:

LEMO® 00 connectors. Adaptors for LEMO 1 and BNC available.

Keypad: English or International symbols

Languages: Available in keypad selectable languages: English, French, German, Spanish, Italian, Russian, Japanese, and user-defined custom languages

USB High Speed Communications Port

Dimensions:

9.375" H x 5.45" W x 1.5" T
238 mm x 138 mm x 38 mm

Weight: 2.35 lbs. (1.0 kg) with battery

PC Requirements: Compatible with Microsoft® Windows® XP® and Microsoft Windows 2000®

Warranty: One year warranty, battery not included. Optional second year warranty available.

Numeric Datalogger

- Stores up to 100 calibrations and 2000 thickness measurements.
- Optional Extended memory stores up to 500 calibrations and 10000 thickness measurements

Standard Inclusions

EPOCH LT, Microprocessor-Based Ultrasonic Flaw Detector with numeric datalogger includes:

- **EP4/MCA:** Mini charger adapter
- **EPLT/BAT:** Nickel metal hydride rechargeable battery
- **EPLT/CAL-NIST:** NIST calibration certificate
- **EPLT/MAN:** Instruction manual
- **36DLP-CC:** Transport case
- **DAC/TVG Software**

Optional Accessories

- **EP4/SC:** Shipping hard shell case
- **PLUS/RPC:** Rubber protective carrying case
- **EPLT/DP:** Display protectors (LCD)
- **EPLT/MEM:** Extended memory

Software Options:

API 5UE: Allows defect sizing according to API Recommended Practice 5UE. Uses the Amplitude Distance Differential Technique (ADDT) to measure the size of potential defects during the prove-up process of OCTG pipe. The measurement process is simple and repeatable since all ADDT variables are captured from a Peak Memory envelope. (PN: EPLT/API5UE)

Advanced DAC/TVG: Calculates signal amplitude as a percentage or dB level compared to a DAC curve or a reference echo amplitude fixed with Time Varied Gain. DAC versions include ASME, ASME 3, JIS, and Custom. Contains several key features including: dynamically adjustable DAC curves, switchable DAC & TVG views, 80%-20% DAC/TVG, a flexible TVG table, and custom DAC warning curves. (PN: EPLT/ADT)

Onboard DGS/AVG: Flaw sizing technique that permits echoes to be evaluated using DGS/AVG diagrams associated with a particular transducer and material. Allows complete onboard DGS/AVG setups using an extensive transducer library. Custom probe setups may be created using the GageView Pro Interface Program. (PN: EPLT/DGS/AVG)

EPOCH LT Square Wave Pulsar: Square Wave Pulsar tunable from 1 to 10 MHz for optimal signal-to-noise ratio and maximum penetration in difficult materials. (PN: EPLT/SWP)

Low PRF (30 Hz): Reduces or eliminates "wrap-around" noise by setting the PRF to a fixed 30 Hz. This feature is often necessary when inspecting materials that are highly attenuating or have long sound paths. (PN: EPLT/LPRF)

Echo-to-Echo Thickness: Displays the true metal thickness and ignores the thickness of the coating layer. There is no need to remove the coating. (PN: EPLT/ECHO)

Extended Range: Extends Standard Range specifications: 0.038 to 400 inches (1 to 10,000 mm). (PN: EPLT/RANGE)

AWS D1.1 and D1.5:

Provides a dynamic reflector "indication rating" for various AWS weld inspection applications. This allows for a more efficient inspection by eliminating manual calculations. (PN: EPLT/AWS)

GageView™ Pro Interface Program including USB cable:

(PN: GAGEVIEWPRO-KIT-USB)

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