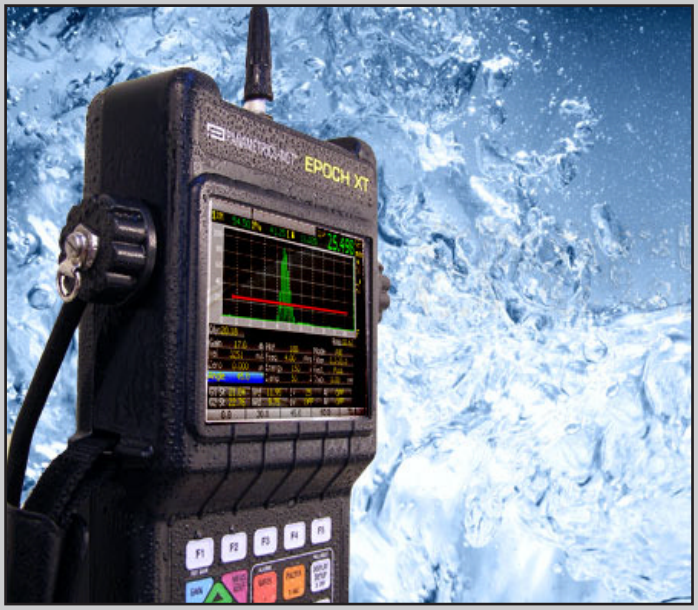
EPOCH XT
ULTRASONIC FLAW DETECTOR



GENERAL DESCRIPTION

THE COMPLETE ULTRASONIC FLAW DETECTOR

The new Panametrics-NDT EPOCH XT Ultrasonic Flaw Detector is designed for great inspection flexibility and for use in extreme environments. It combines a multitude of enhanced flaw detection and measurement features, a bright multicolor LCD, versatile battery options, powerful data management, and numerous software features in a compact unit with a sealed case designed to meet IP67 requirements.

FEATURES

- EN 12668-1 compliant
- Tested for Explosive Atmosphere, Vibration and shock
- Designed to meet IP67 requirements. Sealed to withstand harsh environments
- Dynamic DAC/TVG Standard
  - Dynamic DAC curves
  - Custom warning levels
  - Meets ASME and JIS requirements
  - Advanced TVG Table allows customized TVG setups
- Multiple Battery Options – can be used with Lithium Ion, NiMH, or C-Cells
- Host USB Port for direct printing and storage to USB drives
- Client USB Port for PC communication
- "PerfectSquare™ Technology": Pulse is electronically controlled on both the leading and trailing edges to maximize transducer performance and near surface resolution.
- PRF adjustable from 10 Hz to 1kHz in 10Hz increments. All measurements are taken "single shot".
- Powerful alphanumeric datalogger
  - Corrosion thickness gage file types can be set up onboard
  - Simple incremental files
- Multi-color LCD display
- Lightweight – 4.7 lbs (2.1 kg)

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ULTRASONIC FLAW DETECTOR

TECHNICAL SPECIFICATIONS

GENERAL
EN12668-1 Compliant
Weight: 4.7lbs (2.1kg) with Li Battery

Dimensions: 10.9"Hx5.9"Wx2"D (at hand), 2.8" (at display); 277mmx150mmx51mm (at hand), 71mm (at display)

Keypad: English, International, Japanese or Chinese

Languages: English, Spanish, French, German, Italian, Japanese, Chinese, Russian, Korean, Norwegian, Swedish Custom languages available.

Transducer Conns: BNC or Number 1 Lemo

Battery: Choice of Lithium Ion, Nickel Metal Hydride, and Alkaline C-Cells

Battery Operating Time: Lithium Ion: 9-10 Hours, NiMH: 5 Hours, C-Cells: 1-2 Hours

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

ENVIRONMENTAL RATINGS
IP67 Designed to meet the requirements of Environmental Ingress Protection Rating (with BNC connectors only)**

Explosive Atmosphere approved per MILSTD-810F, Procedure 1, NFPA 70E, Section 500, Class 1, Div. 2, Group D
Shock tested - per IEC 60068-2-27, 60g's, 6msec H.S., 3 axes, 18 total
Vibration Tested – Sine Vibration per IEC 60068-2-6, 50-150 Hz @ .03" DA or 2g's, 20 sweep cycles

DISPLAY
Color Liquid Crystal display with 60 Hz update, user-selectable color schemes and brightness, and split screen and full screen modes.

Display Dimensions:
320 Pixels (W) x 240 Pixels (H) Color
4.313" W (110 mm) x 3.125" H (79 mm)

Baseline Break Mode: All zero cross points on the RF waveform are shown as zero points in Fullwave mode.

Amplitude Grid Modes: 100% or 110% Amplitude Display

Time Base Grid Modes: Standard 0 to 10 division, Soundpath Mode divides Range into 5 equal sections with grid lines, Leg Mode displays Soundpath Legs as grid lines

PULSER
Tunable Square Wave Pulser

PRF: User Selectable or Auto from 10 Hz to 1000 Hz

Energy Settings: 50 to 475V in 25V increments

Pulse Width: Adjustable from 30 to 10,000ns (0.1 MHz) with PerfectSquare™ Technology

Damping: 50, 63, 150, 400 Ohms

RECEIVER
Gain: 0 to 110 dB – Two user-defined gain step adjustments and presets above function keys.

Total Instrument Bandwidth: 0.2 – 26.5 MHz @ -3 dB

Digital Filter Settings:
- 0.2 – 10.0 MHz
- 0.2 – 1.2 MHz
- 0.5 – 4.0 MHz
- 1.5 – 8.5 MHz
- 2.0 – 21.5 MHz
- 5.0 – 15.0 MHz
- 8.0 – 26.5 MHz

Rectification: Fullwave, Positive Halfwave, Negative Halfwave, RF

System Linearity:
Horizontal: +/- 0.2% FSW
Vertical: 0.25% FSH, Amplifier Accuracy +/-1dB

Reject: 0 to 80% full screen height with visual warning

CALIBRATION
Automated Distance Calibration for Velocity and Zero Offset

Test Modes: Pulse Echo, Dual, or Through Transmission

Units: Millimeters, Inches, or Microseconds

Range: 0.073 to 527" (1.86 to 13,400 mm)

Velocity: 0.025 to 0.6000 in/isec (635 to 15240 m/S)

Zero Offset: 0 to 4950 ìsec

Display Delay: -2.323" to 500" (-59 mm to 12700 mm)

Refracted Angle: 10° to 85° in 0.1° resolution

MEASUREMENTS

Types: Thickness, Soundpath, Projection, Depth, Amplitude, Time-Of-Flight for both Gate 1 and Gate 2.

Echo-To-Echo: Standard.

Five Measurement Display Locations: User selects up to five measurements from either gate to display on the live screen.

DAC/TVG Standard: Up to 50 points captured, ASME, ASME III, JIS, 80-20%, CUSTOM DAC, and TVG Table. 110dB Dynamic Range, 100dB per usec adjustment, full gain, range, and delay adjustments during setup, view switchable between DAC/TVG.

CUSTOM DAC with up to three warning curves from +10 dB to -24 dB

TVG Table setup for advanced Time Varied Gain applications. Also allows TVG setups to be built from DGS/AVG diagrams.

Amplitude Measurement: 0 to 110% full screen height with 0.25% resolution

Curved Surface Correction for Angle Beam measurements standard

X-Value Correction for distance from Beam Index Point to front of transducer.

GATES
Two Fully Independent Gates for Echo Height and Time-Of-Flight.

Gate Start: Variable over entire displayed range

Gate Width: Variable from Gate Start to end of displayed range

Gate Height: Variable from 2 to 95% Full Screen Height

Alarms: Positive and Negative Thresholds; Minimum Depth on Gate 1 and Gate 2

Zoom: Displayed Range is Gate 1 Width

INSTRUMENT INPUTS/OUTPUTS
USB Client Port: For communication with GageView Pro

USB Host Port: Allows direct printing to any PCL5 compatible Laser or Inkjet printer as well as data storage on USB drives.

LEMO Hardware I/O (optional): Alarm Outputs, Trigger In/Out

DATA STORAGE
Up to 10,000 IDs with Waveforms, Measurements, and Setup Parameters

WARRANTY
One year limited warranty.

STANDARD INCLUSIONS
EPOCH XT Base Instrument Includes:
- EP4/MCA: AC Adaptor
- EPXT-TC: Transport Case
- EPXT-MAN: Instrument Operating Manual
- EPXT-HS: Bi-Directional Hand Strap
- EPXT-PS: Rubber Coated Stainless Steel Pipe Stand
- Lithium Ion or Nickel Metal Hydride Battery
- Cap(s) for transducer connectors

OPTIONAL ACCESSORIES
- EPXT-EC: External Smart Battery Charger
- EP4/CH: Chest Harness
- EPXT-RPC: Rubber Protective Case
- EPXT-DP: Clear Display Protectors (10)
- EPXT-C-16HW-6: 16 pin Hardware I/O cable with diagram
- EPXT-HWIO-B, L: Hardware I/O option
- EPXT-SEAL-KIT: Set of O-Rings and membrane
- EPXT-EW: Extended Warranty for one additional year.

SOFTWARE OPTIONS
DGS/AVG (PN: EPXT-DGS-AVG)
AWS D1.1/D1.5 (PN: EPXT-AWS)
GAGEVIEW PRO (PN: GAGEVIEWPRO-KITUSB)

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