# µPELT-ts  PELT® Gauge (PELT-uPts3H)

## Multi-Layer Ultrasonic Thickness Gauge

### BENEFITS

- **Up to 3 layers from one measurement**

- **Non-destructive measurements of thick, soft or attenuative coatings on any substrate**

- **Measures coatings on textured or grit-blasted substrates**

- **Thickness verification and Process Control of complex coatings**

### FEATURES

- **USB Interface**

- **Color Touch-screen display**

- **Smaller and Lighter than µP301HE**

- **Improved Gauge Precision (R&R results) and Excellent Accuracy**

- **Compatible with µPELT Calibrations & Jobs**



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### PELT-uPts3H

The µPELT-ts model PELT-uPts3H PELT gauge is a precise, multi-layer ultrasonic coating thickness gauge. PELT gauges use advanced ultrasonic technology to achieve excellent measurement accuracy, repeatability and reproducibility. The PELT-uPts3H hand-held portable gauge allows monitoring in any production environment. The supplied Windows application software manages data transfer and automated ultrasonic waveform analysis (Autogauge2 Algorithms).

PELT gauges readily monitor both coating thickness and uniformity to verify that all coating layers are within specification. Ease of measurement allows the user to measure more point locations per part and increases the number of parts that can be measured for improved process control.
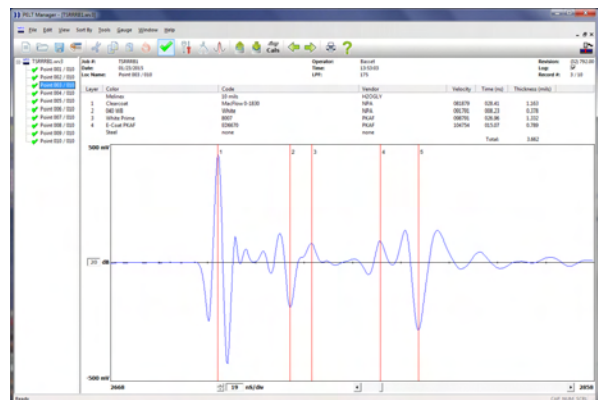


**PELTManager™ host PC software (included)**

The PELT Manager Windows® application provides a powerful and easy to use interface for µPELT-ts gauges. Calibration information and measurement data can easily be transferred to and from the gauge. Automated ultrasonic waveform analysis is performed by updated Autogauge2 algorithms.

## Measurement Specifications

**Measurement Method**
Contact ultrasonic (ASTM standard E797-95)

**Couplant**
Application dependent, usually water

**Max. Layers**
Three (3)

**Calibrated Accuracy**
± 1.3 microns (+/- 0.05 mils) or ± 2% of the coating thickness, whichever is greater

**Resolution \***
1 micron (0.001 mm, 0.04 mils)

**Minimum Layer Thickness \***
Mid coatings:     15 microns (0.015 mm, 0.6 mils)
Single coatings: 15 microns (0.015 mm, 0.6 mils)
Top coatings:     25 microns (0.025 mm, 1.0 mils)

**Maximum Thickness (Total Coatings) \*\***
Standard transducer:     10 mm   (0.40 in.)
Optional transducer:     15 mm   (0.60 in.)

**Measurement Units**
Selectable: Metric (microns) / English (mils)

**Gauge Repeatability and Reproducibility (% R & R) \*\***
< 10% for solvent and waterborne coatings with typical process variation (Varies by layer)

**Supported transducers**
Contact or Contact Delay Line

**Minimum radius of curvature of measurement surface**
Using standard transducer:
Convex surface:   > 50.8 mm (2.0") radius
Concave surface: > 152.4 mm (6.0") radius

## Device Specifications

**Data Storage**
Non-volatile storage for data and calibrations
Storage for >10k measurement points

**Power**
3.6V Li Ion rechargeable battery (2 included)
8 hour shift on one battery, (3 hour recharge)
100-240V; 50-60Hz 5VDC external AC
   Adapter (included)
   [Also charges the battery in the gauge]

**Dimensions**
175mm x 150mm x 55mm (6.9" x 5.9" x 2.2")
Weight:  1.18Kg (2.6 lbs) with battery

**Environmental**
Operating Temp: $0^\circ$ C to $40^\circ$ C
Humidity:  < 80% at all times

**Housing**
Extruded aluminum – powder coated
Protective films included (screen & body)

**Acceleration / Shock**
Operational after 11 mins. of 10-500Hz,
   1g. sinusoidal vibration
Operational after single 11-ms. shock of 30g

## Software Requirements

**Operating System**
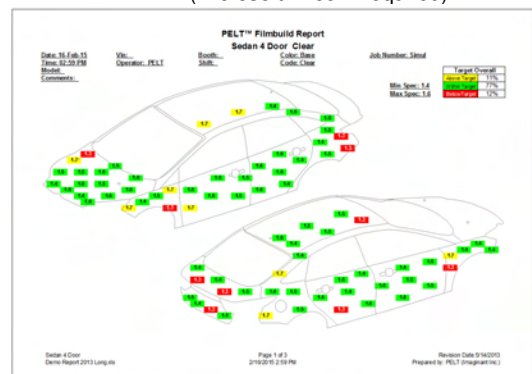Microsoft® Windows XP, Vista, Win 7

## Thickness Data Reporting

**Measurement Data Format**
Delimited ASCII files generated by PELT Manager™ software

**Reporting Software**
Optional:  Custom job/part silhouettes
   Depicts 1 layer per sheet
   (Microsoft Excel ® required)



\*    Minimum thickness and resolution are typical, based on: solvent, water-borne and powder paint coatings.
\*\*   Material dependent, value based on non-metallic example.
Specifications are subject to change without notice.
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