

μP301HE PELT®

Multi-Layer Ultrasonic Thickness Gauge



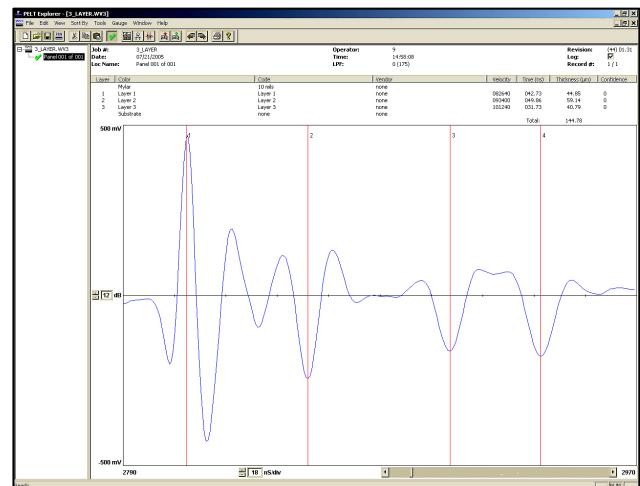
FEATURES

- Measures thick, soft or attenuative coatings on composites, metal, wood and rubber.
- Measures coatings on textured or grit blasted substrates
- Instantly measures up to 3 layers simultaneously. Reports individual thickness and total thickness.
- Direct, non-destructive measurements eliminate the need for destructive analysis or specially prepared test samples.
- Portable operation of up to 8 hours with a removable and rechargeable battery.

μP301 PELT HE (High Energy)

The μP301HE model PELT gauge is a high resolution, ultrasonic coating thickness measurement system. This handheld gauge uses state-of-the-art technology and is capable of picosecond resolution. The result is unparalleled precision and accuracy.

This advanced technology provides a high energy ultrasonic pulse and can be used to measure soft or attenuative coatings as well as thick coatings on virtually any substrate. The μP301HE can also be used to provide accurate measurements over grit blasted steel or textured substrates or on other materials where ultrasonic wave scattering is a problem.



PELT Explorer host PC software (included)

PELT Explorer software is a Windows® based host PC program that provides a powerful and easy to use interface to the μP301HE. Calibration information and measurement data can easily be transferred to and from the gauge.



The leader in multi-layer coating thickness gauges

Measurement Specifications

Measurement Method

Contact ultrasonic in accordance with ASTM standard E797-95

Couplant

Application dependent, usually water

Max. Layers

Three (3)

Calibrated Accuracy

± 1.3 microns (+/- 0.05 mils) or $\pm 2\%$ of the coating thickness, whichever is greater.

Resolution *

1 micron (0.001 mm, 0.04 mils)

Minimum 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 **

Standard probe: 1.1mm (.044 in.)
Optional probe: 10 mm (.394 in.)

Measurement Units

Metric / English selectable

Gage Repeatability and Reproducibility (% R & R)

< 10% for solvent and waterborne coatings

Supported transducers

Contact or Delay Line – 5 MHz and higher

Minimum radius of curvature for gauging surface

Convex surface radius = 6x probe diameter
Concave surface radius = 18x probe diameter

Using standard probe:

Convex surface: > 2.0" (50.8 mm) radius
Concave surface: > 6.0" (152.4 mm) radius



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Device Specifications

Data Storage

Non-volatile memory storage of all data and calibration files
Storage of ~ 1000 measurements

Power

10.8V Ni-MH rechargeable battery – 2 included
8 hours on one battery, 1 hour recharge time
100-240V; 50-60Hz power supply included

Dimensions

255mm x 190mm x 45mm (10" x 7.5" x 1.8")
Weight: 1.6kg (3.5 lbs) with battery

Environmental

Operating Temp: 0°C to 50°C (32 - 104°F)
Humidity: < 85% at all times

Case

Extruded aluminum – powder coated

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 and higher

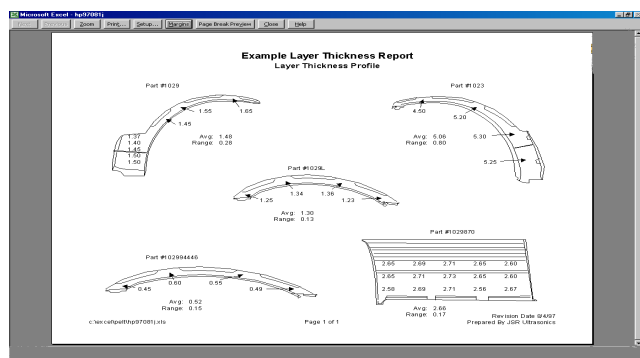
Thickness Data Reporting

Measurement Data Format

Delimited ASCII files generated by PELT Explorer software

Reporting Software

Standard: Custom job/part silhouettes or thickness vs. location chart. Depicts 1 layer per sheet. (Microsoft Excel® required)



* Minimum thickness and resolution are typical, based on: solvent, water-borne and powder paint coatings using standard probe.

** Material dependent, value based on non-metallic example. Specifications are subject to change without notice.

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