DJH DESIGNS INC

PHAETON™

OFFLINE FILM THICKNESS PROFILE MEASUREMENT

Phaeton™ is the fastest, most accurate lab quality film thickness measurement instrument anywhere. Phaeton™ is extremely easy to use, requiring no special operator skill and is extremely reliable. On a 1000mm wide sample Phaeton™ can perform up to 1000 measurements in under 5 seconds across the full width sample delivering a complete picture of the coating profile fast and efficiently. Measurement of the back/reverse coat is done by simply flipping over the sample, and in another 5 seconds or less the complete back side profile can be displayed. No other instrument does that with this level of accuracy and speed, and without any calibration requirements for different types of coatings, coating colours, or substrate types. Placing the Phaeton™ near the exit shear/inspection station of your CPL provides full strip width measurement in seconds, installing an optional second monitor outside the coater room gives instant feedback to the operators allowing a quick response to any issues that are detected.

Phaeton™ + Colour Scan - This powerful new option gives you the added the ability to deliver high precision colour measurement across the full sample width within seconds. No other device on the market can give you both film thickness profiles and full width colour measurement this fast and accurately.

SIMPLE PRINCIPLE OF OPERATION

COMPLETE CONTROL OF PRIMER & TOPCOAT DRY FILM BUILD

PHAETON™ is a direct measurement device. A laser ablates the coating from the metallic substrate, the resultant ablation point is measured by a high precision laser displacement sensor capable of performing up 49,000 measurements per second at a maximum resolution of 0.03µm.



PHAETON™ MODELS AVAILABLE:

The Phaeton™ is available in 2 standard sizes 1000mm (39”) and 1250mm (49”).
Custom sizing is also available to suit.

FAST ACCURATE AND EASY

- Measures full-width samples to 1250mm. Longer samples can be measured by cutting the panel in half and using the stitch feature to create a single profile measurement.
- Measurement completed in approximately 5 seconds
- User programmable measurement spacing
- Measures from 3.5µm to 220µm thick coatings
- Accurately measures textured and wrinkle coatings and can characterize the peak to valley depth and spacing of these finishes.
- Full-width profiles at the press of a button measure
- Instantly find coater set up faults including
  > Out of balance coater
  > Out of shape coating roll – positive or negative crown
  > Find non-optimal roll profiles – e.g. localized ridges or valleys
- Measurement accuracy/reproducibility up to 0.2µm
- Surface roughness measurement

PHAETON™ + COLOUR SCAN

PHAETON™ + Colour Scan not only recognizes reference colors by comparison, but identifies individual colors clearly from their coordinates in the color space. With its very high measurement speeds, the Phaeton + Colour Scan option is suitable for applications where colors and shades need to be examined to very high accuracies.

Colour Measurement Characteristics

- Measurement speed: max. 2 kHz
- Non-contact measurements
- Measurement precision
  $\Delta E \leq 0.08$ *(5nm)*
- Color spaces: *XYZ; L*a*b*; L* u* v**
- Reference colors:
  15 taught-in spectra
- Adjustable light source: *A, C, D65, D50, D75, E, F4, F7, F11*
- Standard observer:
  2°, 10° (adjustable)

SPECIFICATIONS

- **Dimensions (1250 model):** 1650mm x 550mm x 1200mm (LxWxH) with stand. Without stand (H) 600mm
- **Power:** 110 to 240 VAC 50/60Hz auto sensing.
- Machine requires an extractor fan (not included) minimum 800 CFM.

ADDITIONAL NOTES

- Access to the Internet recommended.
- Computer Hardware – Windows based PC. Specifications are subject to change without notice.
- An additional remote monitor at the coater room is available as an optional extra.
- One year warranty.

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INNOVLS
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