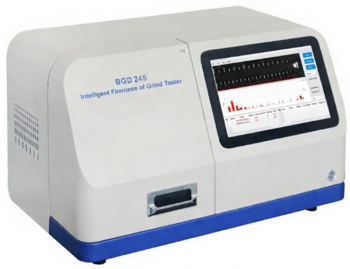
Intelligent Fineness of Grind Tester

BGD 245

Product Description

Achieve consistent, repeatable fineness-of-grind measurements with the Solvica BGD 245 Intelligent Fineness of Grind Tester. Designed for paints, coatings, and other water-based or solvent-based samples, this automated instrument combines controlled sample drawdown with advanced image analysis to reduce operator influence and simplify quality control.



The BGD 245 captures and analyses particle images, determines the fineness of grind, and displays particle distribution alongside results based on ISO 1524 reading criteria. Adjustable detection settings, compatibility with a range of grind gauges, and PDF reporting make it a practical solution for routine laboratory testing

Standards

ISO 1524:2020 — Paints, varnishes and printing inks — Determination of fineness of grind

Technical Specification

Measuring the fineness of grind of paints using a grind gauge is a traditional and widely used method. However, achieving repeatable and comparable results can be challenging. One reason is that the force and speed applied to the scraper vary between operators as they draw the sample along the gauge’s grooves. Another is the subjective assessment of particle count and distribution within the required five-second reading period, particularly when using gauges with a narrow measuring range, such as 0–25 µm.

The BGD 245 Intelligent Fineness of Grind Tester is a new instrument from Solvica. It automatically draws the sample across the gauge at a consistent speed and force, then immediately captures and saves images of the particles in the grooves. Using the reading criteria specified in the relevant standards, the instrument automatically determines the fineness of grind within five seconds and displays a particle distribution chart.

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Features

- Fully automatic, rapid fineness-of-grind measurement, offering ease of use, high efficiency, and good repeatability and reproducibility.
- Displays test results in accordance with ISO 1524.
- Accommodates various grind gauges, including single-channel (170 × 50 mm), double-channel (175 × 65 mm), and wide-channel (175 × 65 mm) gauges, with measuring ranges of 0–25, 0–50, 0–100, 0–150, and 0–200 µm
- Uses a deep-learning model to identify particle characteristics and distinguish particles from pits, scratches, small bubbles, and bubble clusters that might otherwise be mistaken for particles. The system also displays the number and size of these defects.
- Displays the sample name, batch identification, test time, current operating step, original image after drawdown, processed image, particle distribution, and final assessment according to Method A and Method B
- Allows operators to adjust particle-size recognition thresholds to improve agreement between visual assessment and automated detection. Particles smaller than the minimum threshold are excluded from the statistics. Objects larger than the maximum threshold that exhibit bubble characteristics are classified as bubbles. Operators can also choose whether to include bubbles as particles in the readings
- Allows operators to enlarge the original image or selected areas of the particle distribution image to compare visible particles with those included or excluded by the software
- Provides an adjustable delay between sample drawdown and result reading to ensure consistent timing across tests
- Provides a movable, 3 mm-high assessment band to assist with reading results in accordance with ISO 1524. Operators can move the band up and down, and the number of particles within it is displayed in real time
- Displays image-processing parameters, particle recognition thresholds, drawdown speed, the region of interest (ROI) within the gauge groove, and particle counts. Operators can also select and remove incorrectly identified particles
- Combines a high-precision motion control system with a high-precision imaging system to deliver clear images and reliable results
- Exports test results as PDF documents.
- Suitable for both water-based and solvent-based samples

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Main Technical Parameters

Parameter	Specification
Model	BGD 245
Measuring range	0–200 μm, depending on the grind gauge used
Scraper drawdown speed	30–90 mm/s, adjustable
Grind gauge thickness	13.1–13.4 mm
Measuring accuracy	One graduation of the grind gauge used
Test duration	Less than 1 minute; minimum 10 seconds
Total power	0.5 kW
Dimensions (L × W × H)	640 × 360 × 415 mm
Net weight	30 kg

Packing list:

- Main instrument – 1 pc
- Keyboard and mouse set – 1 pc
- Scraper – 1 pc
- Grind gauge stopper – 1 pc
- Paint drip tray – 1 pc
- Power cord – 1 pc
- Instruction manual – 1 pc
- Verification Certificate – 1 pc

Please note: The grind gauge is not included and must be ordered separately. Please specify the required gauge type and measuring range when placing your order

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Accessories

- BGD 242-series - Fineness of Grind Gauges, Double Channel 12.5 mm
- BGD 244-series - Fineness of Grind Gauges, Wide Channel 37mm
- BGD 241-series - Fineness of Grind Gauges, Single Channel 12.5 mm

Disclaimer

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