



TORONTECH

CARBON BLACK DISPERSION TESTER - TORONCBDT™ -SERIES



Carbon Black Dispersion Tester – ToronCBDT™-Series is a specialized instrument designed to evaluate the dispersion quality of pigments or carbon black in polyolefin pipes, fittings, and composite materials.

APPLICATIONS

- **Polyolefin Quality Control:** Serves as the primary tool for evaluating the dispersion quality of carbon black and pigments in polyolefin pipes, fittings, and composite materials, ensuring long-term material integrity and performance.
- **Microscopic Defect Analysis:** Utilizes a built-in 5 MP professional microscope and advanced image processing to accurately grade dispersion and measure particle sizes ranging from microns to millimeters.
- **Advanced Image-Based Grading:** Employs fast, accurate image analysis with flexible segmentation (automatic and manual modes) to grade samples, providing a quantifiable and objective assessment of pigment distribution.
- **Data Generation & Reporting:** Automatically generates comprehensive data sets, including particle count, size, area data, grayscale maps, and particle size distribution charts, with ready export to Excel for further statistical analysis.
- **Standardized & Consistent Evaluation:** Allows users to create and store custom image libraries for consistent, repeatable evaluation across large production runs, ensuring quality assurance standards are met.
- **Detailed Documentation:** Produces full test reports in PDF or image format, containing sample details, original images, reference standards, and objective dispersion analysis data for robust quality auditing.

FEATURES

- Uses advanced image analysis for fast, accurate grading of carbon black dispersion.
- Measures particle sizes from microns up to millimeters.
- Built-in professional microscope with a 5 MP CMOS image sensor.
- Saves images in multiple resolutions: 640×480, 1024×768, 1280×1024, and 2592×1944.
- Packed with flexible image processing tools to handle a wide range of applications.

- Offers both automatic and manual modes for image segmentation.
- Pinpoint analysis of selected regions of interest.
- Micrometer scale for pixel calibration and a movable ruler for distance measurements.
- Create and store custom image libraries for consistent evaluations.
- Generates particle count, size, and area data, with exports ready for Excel.
- Provides grayscale maps, particle size distribution charts, and granularity diagrams.
- Full reporting with sample details, reference standards, original images, and grayscale maps — output as images or PDFs.
- Works with Windows XP, 7, and 10.
- USB 2.0 connection supports a variety of acquisition devices, including cameras and digital cameras.

TECHNICAL SPECIFICATIONS

Model	ToronCBDT™ -3600 (Polyethylene)	ToronCBDT™ -3900 (Rubber)	
Detection Range	0.5µm-1cm	1µm-1cm	
Imaging Resolution	2592×1944 (5MP CCD camera)		
Optical Magnification	100×		
Light Source Angle	30°	Adjustable angle	
Image Resolution	640×480, 1024×768, 2048×1536, 2592×1944		
Analysis Time	Varies slightly based on selected resolution		
Voltage	220V/2A/50Hz (110V is also available)		



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