

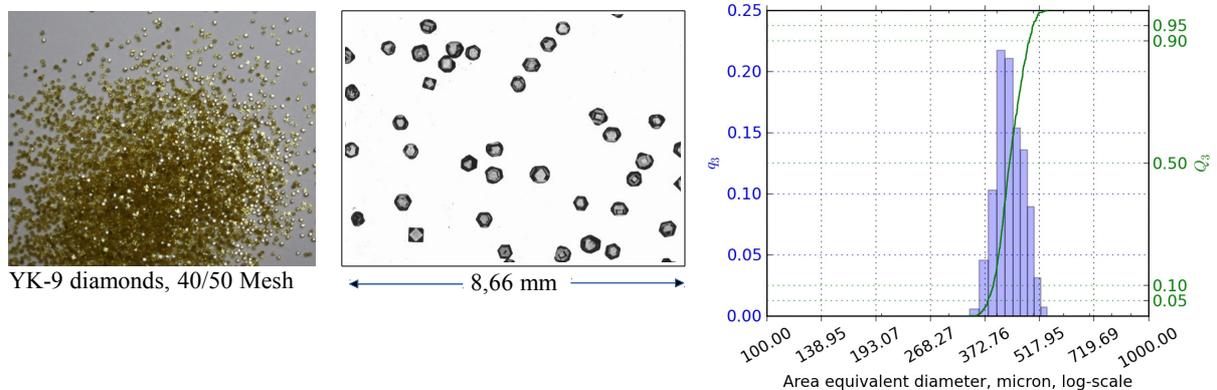
# DiaShape

## Analysis of diamonds

DiaShape is a quality control and characterization system for industrial and natural diamonds, ABN (amorphous boron nitride) and CBN (cubic boron nitride) grits. It is unique in its set of features, simple user interface, and rapid characterization process, from the sample preparation to the printed certificate. The interactive reporting system has many reporting capabilities and allows to customize the histograms and measurement reports.

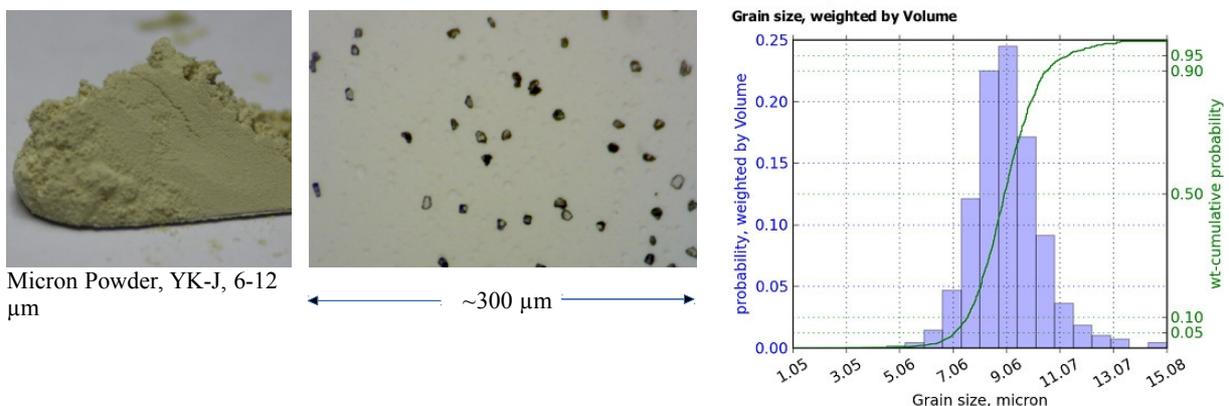


## Shape and size measurement with DiaShape and a high resolution film scanner

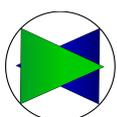


DiaShape enables to analyze the quality class of industrial diamonds lots by means of shape (crystallinity and ellipticity) and optical properties (transparency and color). Sieve analysis breaks down where the differentiation of qualities is needed for a single size range. The shape and color analysis of DiaShape opens new possibilities in the quality inspection.

## Shape and size measurement with DiaShape and a digital microscope



To analyze the true geometrical dimensions of nanoparticles three kind of microscopes are in use depending on the size of the samples: confocal laser scan microscope (0,2 - 2 µm), scanning electron microscope (20 nm - 1 µm) or transmission electron microscope (1 nm - 200 nm). Particles with a size down to a few nanometers can be detected and statistically analyzed (e.g. grain size distribution).



## Specifications:

Recommended size range:

DiaShape M: Medium format scanner: 20 µm to 5 mm in grain size

DiaShape D: Digital microscope: 2.5 µm to 1 mm in grain size

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Characterization parameters:	<ul style="list-style-type: none"> <li>• size: grain/grit size, max size, min size</li> <li>• shape descriptors according to ISO 9276 - 6 such as aspect ratio, ellipse ratio, elongation, circularity, convexity</li> <li>• optical properties: transparency, color</li> </ul>
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Typical applications:	Industrial diamonds, natural diamonds, ABN (amorphous boron nitride) grit, CBN (cubic boron nitride) grit
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Report features:	<ul style="list-style-type: none"> <li>• size or shape parameters weighted by length, area or volume</li> <li>• diagrams: histogram and/or cumulative distribution logarithmic and linear scale</li> <li>• statistical quantities: mean, median, standard deviation, span</li> </ul>
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ISO Compliance:	ISO 9276 - 6
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Dimensions / weight:	60 x 30 cm / 8 kg
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Voltage:	220/110 V 50/60 Hz;
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Software DiaShape PRO:	<ul style="list-style-type: none"> <li>• freely programmable size ranges, shape and color filters</li> <li>• allocation of each recognized diamond to the parameter values</li> <li>• calibration of the scanner by the user</li> <li>• creation of individual user profiles</li> <li>• creation of individual measure masks</li> </ul>
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Sample feeder:	Optionally available with a sample feeder for automatic and higher volume operation.

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