



## COMPANY INTRODUCTION

**Diamscope** is the world's first automatic rapid image analysis system to measure fibre diameter of snippets from 0.2 to 50 microns ( $\mu\text{m}$ ). Measuring up to 20,000 fibres per minute, it provides measurements of mean diameter, distribution of diameter, length distribution ( $<0.5\text{mm}$ ), mean curvature and distribution of curvature. It is ideal for measuring glass, ceramic and synthetic microfibres.

For fibres with a high standard deviation of diameter, **Diamscope** provides the only fast and accurate way to measure diameter distribution.

**Diamscope** was developed by BSC Electronics, the world leader in wool, alpaca and cashmere fibre measurement instruments (OFDA) used in over 30 countries. BSC has been designing and manufacturing fibre measurement instruments for over 25 years using the latest digital video technology.

### Key benefits

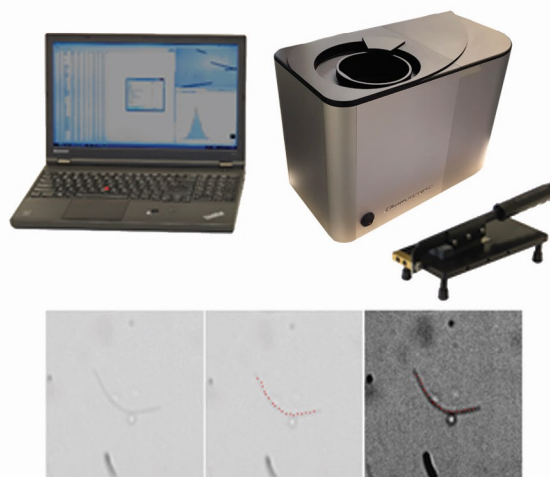
- Understand fibre properties to a level that has not been possible before. **For example:** are the finer or broader fibres dominating the performance of your product? If so, input costs could be reduced by having rapid feedback in fibre manufacture.
- Greater control of fibre quality and avoidance of costly mistakes at the manufacturing stage.
- Reliable monitoring and timely detection of defects for scheduling repairs and maintenance.

### Importance of fibre curve measurement

At present, curve measurement in glass fibres is new and the subject of research since a high speed curve measurement device has not been available. Fibre curvature is the measurement of the degree of bend of the fibre snippet in degrees per mm. Mean values range from 0 deg/mm (straight) to more than 100 deg/mm. Fibre curvature has a good correlation with bulk and therefore can predict insulation and compression recovery properties.

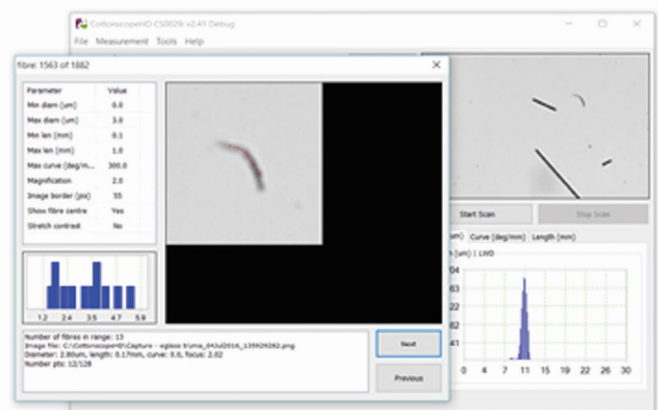
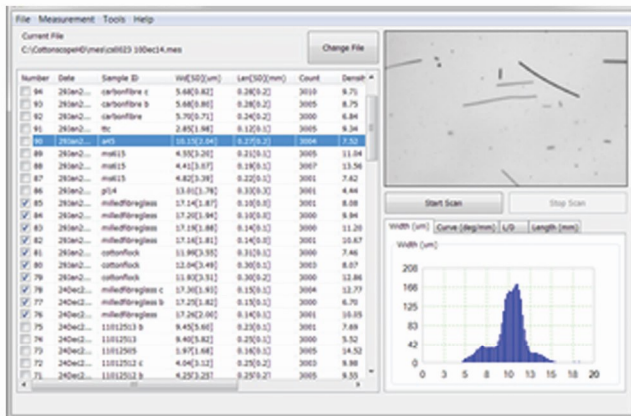
### Fast and Accurate

- Up to 20,000 fibre snippets measured per minute
- 0.2 $\mu\text{m}$  to 50 $\mu\text{m}$  fibre diameter range
- 50 $\mu\text{m}$  to 500 $\mu\text{m}$  length range for length measurement
- High repeatability:  $\pm 0.1\mu\text{m}$  for mean diameter
- No operator bias in measurement



# diamSCOPE

An instrument used for the rapid measurement of fibre diameter



## Easy to use

- Samples with fibre length longer than 2mm are prepared by cutting the sample with the provided cutter and dropping it into the open bowl for measurement.
- After each measurement, the bowl is automatically rinsed and refilled. The fibres are filtered out and the water is stored in a reservoir to be reused.
- Spreadsheet output with 0.2µm resolution diameter histogram as shown below. High precision data is stored for future use.

## Fibre Review Feature

### • Play back measurements

Make adjustments to the parameters and play back the captured fibres for a new measurement without preparing the sample again. Increased productivity, ensure sample evenness and improve sample accuracy.

### • Database of individual

A database of every fibre is stored for every new measurement and can be recalled at any time for review with no impact on performance.

### • Select Fibre of Interest

Specific fibres can be chosen for a closer view and to eliminate false outliers.

### • Analysis Tool

Use the built in tools to visualise the fibres. Ultrafine fibres can be invisible to the naked eye but contain a wealth of information for the computer analysis system.

