

# OFDA2000

Rapid Automatic Measurement of Diameter and Curvature of Wool, Cashmere, Synthetic, Glass and Other Fibres



Developed from the commercial success of the OFDA100, the OFDA2000 uses the same digital video technology to measure fibre diameter and distribution to a resolution of 0.1 $\mu$ m. It is the only image processing instrument that has passed strict testing to be recognized by an International Wool Textile Organization Test Method (IWTO TM47).

OFDA2000 is in some cases, the only accurate method to measure diameter on fibres such as wool, synthetic fibres, mohair, cashmere, glass, metal wires, flax and human hair. The unique advantage of OFDA2000 is the ability to measure thousands of fibre snippets in under 30 seconds. Most fibre samples have a high standard deviation of diameter, and human operators using microscope or electron microscope cannot measure enough fibres to give an accurate mean or distribution. Furthermore, human operators exhibit significant operator bias.

OFDA2000 is also the only rapid, direct way of measuring fibre curvature (related to crimp). The curvature of fibres is critical to their processing. The performance of water and air filters is greatly affected by the curvature of the fibres they are made from.

## Benefits of the OFDA2000

- Worlds fastest fibre diameter and curvature measurement instrument, with up to 20,000 fibre snippets measured per minute
- International recognition through peer reviewed round trials, leading to the acceptance of the test method: IWTO TM47
- The ability to measure fibre diameter of many fibre types by cutting 2mm snippets from samples in web form
- The ability to measure the diameter variation along the staple. Variation of animal fibres and human hair is used to determine the effect of diet, this has a large effect on the strength and processing of the fibres.
- Accurate measurement of fibre curvature

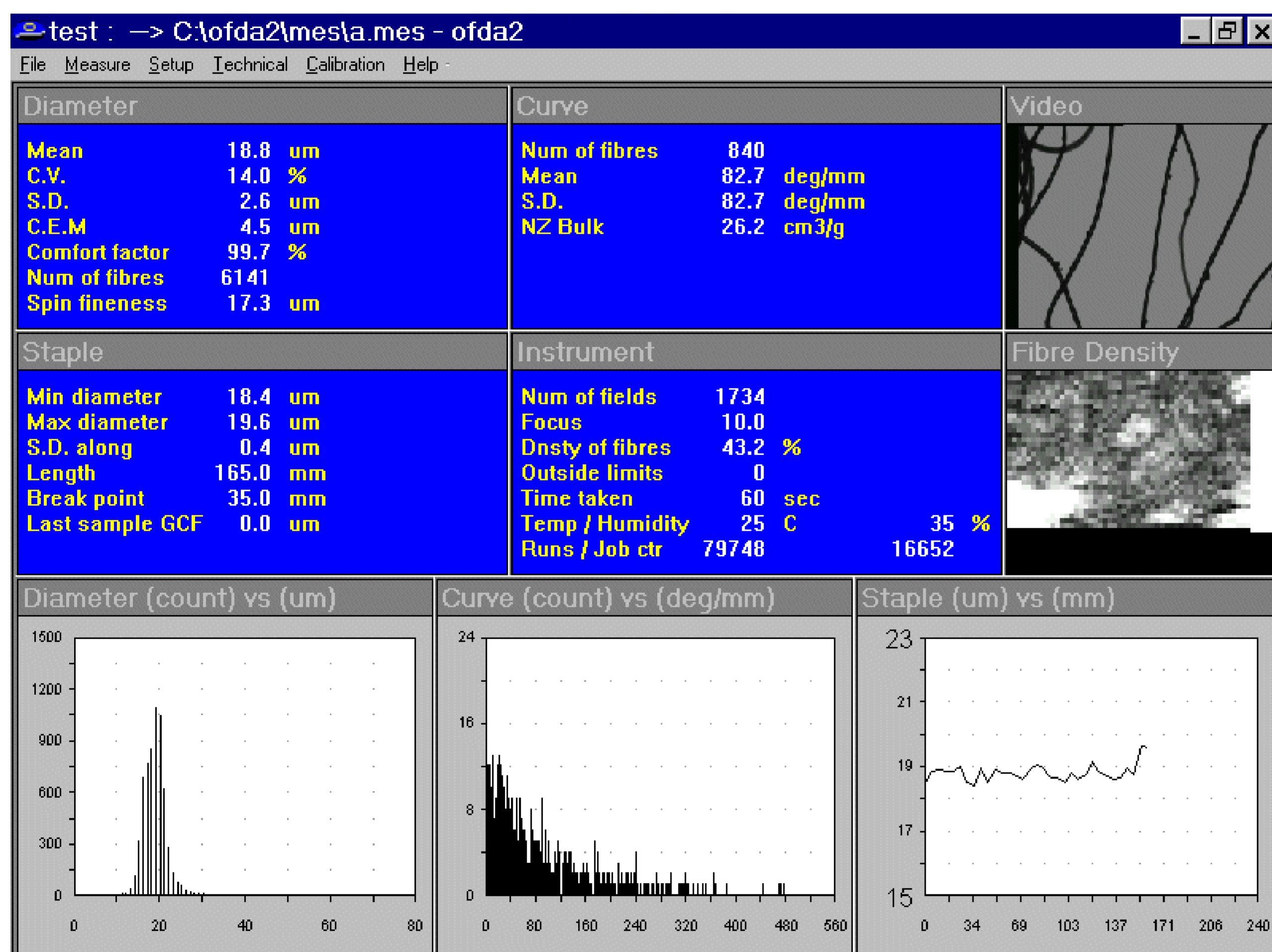
An Industry standard, established for over 19 years, with more than 300 OFDA instruments sold across 30 countries

## OFDA2000 provides the following test results

- Diameter: mean, standard deviation, coarse fibre %, histogram
- Curvature: mean, standard deviation, histogram
- Diameter variation graph along fibre staple for animal fibres and human hair

### Measurement Technique for Cut Snippet Mode

1. Snippets are cut from samples using a guillotine with a blade width of 0.7 or 2mm
2. Snippets are spread onto 70 x 70 x 2mm hinged glass slide using the automatic spreader
3. Slide is placed onto the OFDA2000 and is automatically measured in 25 seconds
4. Snippets are vacuumed off the slide once the measurement is complete



### References and Research Papers

Contact your agent or visit [www.hornik.cc](http://www.hornik.cc) to receive the latest papers in electronic form

### HORNIK FIBERTECH

Chefstrasse 34, CH- 8636 Wald ZH, SWITZERLAND

Phone + 41 55 246 55 11

Facsimile + 41 55 246 55 22

Email: [sales@hornik.cc](mailto:sales@hornik.cc)

### Included Components

- PC with Windows XP
- OFDA2000 instrument
- Meswin software for viewing, sorting and printing of results
- Accessories pack
- Automatic fibre snippet spreader
- Fibre guillotine

### Technical Data

- Bench-top version:
  - Weight: 10kg
  - Dimension: (L x W x H) 49 x 39 x 30cm

### Measurement ranges:

- Diameter: 4 – 300µm
- Curvature: 0 - 360deg/mm
- Diameter Accuracy (not including sampling error): mean and SD  $\pm 0.1\mu\text{m}$   
Histogram in 1µm bins
- Curvature resolution: mean and SD  $\pm 0.1\text{deg/mm}$   
Histogram in 1deg/mm bins
- Fibre types: wool, cashmere, mohair, most animal and synthetic fibre sliver, glass, fine metal wires, some plant fibres
- Voltage: 110 - 240VAC
- Power consumption: 20W

