

# *Diamscope*

*An instrument used for the rapid measurement of fibre diameter*

In today's fast-paced industries, precise measurements play a pivotal role in ensuring product quality and consistency. Our advanced instrument, Diamscope, is a specialized instrument designed to deliver rapid and precise measurements of diameter (within the range of 0.2 to 80  $\mu\text{m}$ ), length (less than 0.5mm) and curl. Diamscope is ideal for measuring glass, ceramic, synthetic and carbon fibres. Our instrument empowers your operations to reach new heights of productivity.

## ***Accurate***

Diamscope employs state-of-the-art technology, delivering precise and reliable measurements within the tightest tolerances. With a reproducibility of 0.2 $\mu\text{m}$  and a precision of 0.1 $\mu\text{m}$ .

## ***Rapid Measurement***

Save valuable time with Diamscope's typical measurement time of less than 1 minute. Real-time data that will propel your manufacturing processes to unprecedented levels of efficiency.

## ***High Fibre Throughput***

Diamscope excels in measuring thousands to tens of thousands of fibres per minute, enabling a comprehensive and accurate analysis of the distribution, thereby defining the precise characteristics of your product.

## ***Self-Cleaning Capability***

Equipped with non-contact measurement capabilities, Diamscope automatically clears the samples after each measurement, efficiently cleansing the area in preparation for subsequent measurements, eliminating the need for manual intervention by the operator.

## ***No Operator Bias***

Our user-friendly interface allows even inexperienced operators to effortlessly navigate the instrument and conduct measurements seamlessly. Experience a short learning curve and increased productivity from day one.

## ***Versatile Applications***

From textiles to manufacturing, Diamscope finds its place in a myriad of industries. Tailored to suit your specific needs, it adapts effortlessly to various types of fibres.

## ***Robust Data Analysis***

Unleash the full potential of your data with our comprehensive analysis tools. Gain valuable insights into trends and variations, enabling you to make informed decisions with ease.

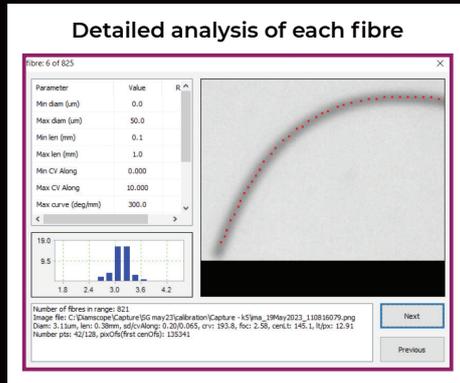
## ***Safe***

The enclosed system utilizes a magnetic stirrer with no externally moving components. The measurement medium consists of chemically safe distilled water that does not react with the sample. Overall, the system is highly secure and poses no significant safety risks during usage.



# Diamscope

At Fibremetrics, our commitment to innovation drives us to continually refine our technology, ensuring that Diamscope, our automatic diameter measurement instrument stands at the forefront of the industry. With our unwavering dedication to excellence, we provide you with a powerful tool that empowers your business to thrive in the modern world.



**50 Comprehensive calibration settings**

Settings

Calibration Selection	1	2
Name	Factory	Ceramic
Date		
Data accumulation	Standard	Standard
Fibre type	General	General
Width calculation	Arithmetic mean	Arithmetic mean
Detection sensitivity	High	High
Histogram bin size (default:0.2) (µm)	0.20	0.20
Diam slope	3.1238	3.4416
Diam ofs	-3.4098	-3.1791
Diam volume slope	0.2670	1.0000
Diam volume ofs	1.1082	0.0000
Compensation factor (CF)	1.0000	1.0000

**Full Fibre Data**

Number	Diameter(µ)	Length(mm)	Curve	CVALong	Focus	CentL	LSPerPix	Diameter along fibre(µ)
1	0.094	0.1	10.3	0	0	193.3	0	0.1
2	3.713	0.17	11.33	0	2.23	153.2	15.15	3.64
3	4.69	0.27	95.1	0	2.55	146.5	12.24	5.01
4	2.102	0.05	85.64	0	3.67	196.6	16.77	1.6
5	3.237	0.1	2.86	0	2.7	162.6	15.16	4.16
6	3.301	0.08	22.29	0	2.37	158	15.19	3.17
7	0.336	0.33	5.71	0	0	210.1	0	0.08
8	1.749	0.05	169.48	0	3.81	185.4	16.18	1.34
9	3.382	0.07	150.87	0	2.87	164	14.26	3.37
10								3.69

## 3 Step Measurement

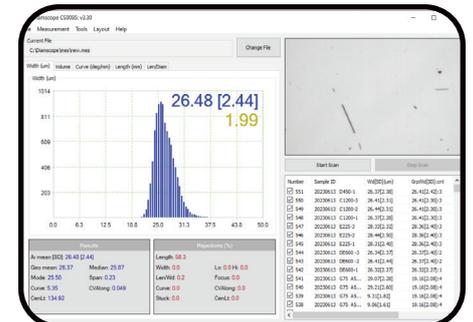
### 1. Cut



### 2. Drop



### 3. Results



Specification	Diamscope
Diameter range	0.2 to 80 µm
Precision of mean	0.1 µm
Reproducibility	< 0.1 µm
Typical measurement time	< 1 minute
Operating system	Microsoft Windows software
Measurement parameters	Diameter, length, curl
Dimensions	36 x 19 x 26 cm
Power requirements	120 or 240 V AC, 50/60Hz
HTC / HS code	90314990 / 9031