



ADVANTAGES - HIGHLIGHTS

- > Economic and productive
 - Rapid
 - Integrating 25 years of experience
 - Impeccable data handling facility
 - Rugged and quasi zero-maintenance
 - Low footprint on the lab bench
 - Extendable, modular, upgradable
- > Flawless metrology
 - Accurate, repeatable and reproducible
 - Cutting-edge technology
 - Constant consistency for optimum precision

APPLICATIONS

- > Research & Development
 - Micro & nanofibrillated cellulose
 - New fibers (annual plant, non-cellulose)
 - Fluff pulp
- > Quality assurance
 - Raw material assessment
 - ISO 16065-2 compliant
- > Process control
 - Refiner energy optimisation
 - Refiner disk wear reduction
 - Monitoring pulpers, screens, cleaners, classifiers, refiners ...

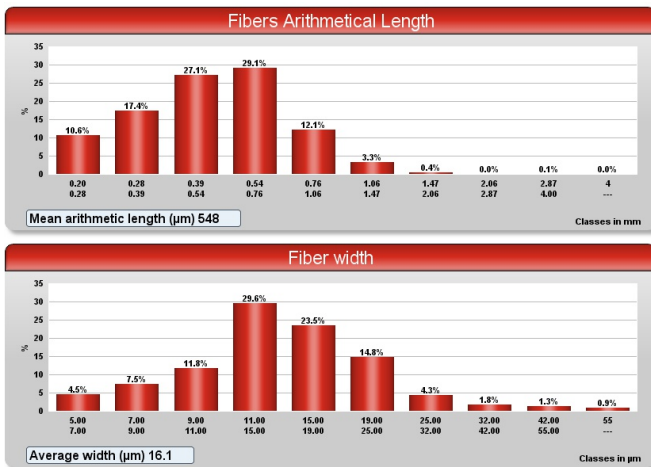
SPECIAL FEATURES

- > Principal-component analysis
 - PCA graph for process control
- > Software extensions
 - A.I. module for vessels detection
 - A.I. module for wall-thickness measurement
 - Customer self-configurable A.I. module
 - Special Techpap "Solver" and "Statmorf"
- > Hardware extension
 - Special module with high-resolution camera for true optical measurement of fiber wall thickness

GENERAL FEATURES

- > Ergonomy
 - Carousel for 6 sample beakers
 - Easy-to-handle user interface
 - Auto-sampling & cleaning
 - Palpable result graphics
- > Particularly interesting data
 - Fibrillation index
 - Calculated wall thickness
 - Detection of broken ends
 - Primary and secondary fine elements





DATA HANDLING & INTERFACES

- > Data Generation
 - Filter parameters adjustable
 - Instant recalculation on parameter change
- > Data Visualisation
 - Several display modes at choice
 - Individual displays user adaptable
- > Data storage
 - PDF report for single runs
 - Excel® file for multiple runs
 - To disk/network/server : OPC, DCS

Relevance

- > Fiber morphology study and control have become indispensable for several industries such as:
 - Pulp & Paper
 - Packaging
 - Molded pulp
 - Fibercement
 - Tobacco
- > The instrument provides the language base for an objective communication along the supply chain, R&D and QC.

Installation requirements

- Bench area 180cm x 90cm
- Power supply 90–240V AC, 50–60Hz, 30W
- Tap water (filtered 5µm, tempered, max 2 bars) and drain; dispensable when auto-dilution is switched off
- Computer with Core i7® and Windows® OS

Analysis duration

- Fibers and fine elements 3 minutes
- Shives and vessels 3 minutes

Measurements

Fibers

Number of fibers per gram	[nr/g]
Coarseness	[µg/m]
Average length arithmetic & weighted in length	[µm]
Length distribution	10 classes
Average width	[µm]
Width distribution	10 classes
Distribution length x width graphic display	
Average curl	[%]
Curl distribution	5 classes
Average kink angle	[°]
Kink distribution	5 classes
Kinked fibers content	[%]
Average number of kinks per fiber	[n]
Broken fibers content	[%]
Fibre fibrillation index	[%]

Fines

Average fine length	[µm]
Fine elements content in area	[%]
Fine elements content in length	[%]
Primary & secondary fines average length	[µm]
Primary & secondary fines ratio	[%]

Shives and Vessels

Average length, width and area	[µm & µm ²]
Length, width and area distribution	10 classes
Total area per gram	[µm ² /g]