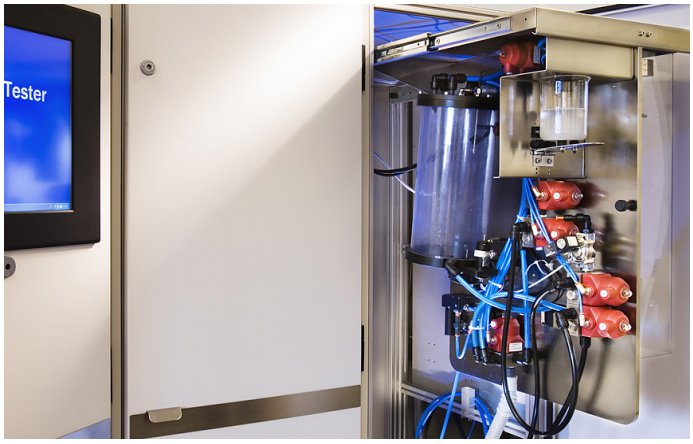
Data sheet

# L&W Pulp Tester Fiber Morphology
## Lorentzen & Wettre Products | Pulp Measurements

L&W Pulp Tester Fiber Morphology measures fibre properties such as width, length, shape factor, fines, and coarseness. It is the only online fibre analyser on the market following the latest international standard for fibre length measurements (ISO 16065-2).

It is based on our L&W Fiber Tester in which the fibres are oriented in an image plane in the measurement cell and do not admit spread in the direction perpedicular to this plane. The tight gap is widened during the washing cycle, which takes place before and after each measurement.




L&W Pulp Tester Fiber Morphology module is possible to pull-out from the cabinet, which simplifies for example maintenance work.

### Fibre width
Thinner fibres, if all other dimensions are constant, provide a better and more even formation in the sheet. The fibre width decreases when lignin is removed. For certain pulps, made from wood from a single species fibre, fibre width does not correlate with fibre length and wall thickness, but in a mix of different pulps, it may correlate. A low fibre width will give a sheet with a more even surface.

### Fibre length
Fibre length is an important property of pulp, and longer fibres generally improve the strength properties up to a certain point. Limited bonding of the fibre in the network will limit the possibility for the fibre to carry a load at the ends of the fibres. With longer fibres, the bonding will be less critical. Very long fibres are more easily entangled with each other, giving the sheet poor formation.

### Shape factor
Shape factor (also called form factor) is an important measure of pulp quality. Shape factor is defined as the ratio of the maximum extension length of the fibre to the true length of the fibre. A high shape factor means straight fibres and gives in most cases good mechanical properties in the sheet. It is well correlated with tensile strength and tensile stiffness. A gently treated laboratory pulp has quite straight fibres, whereas there are several process stages in a mill that are potential curlers of fibres, like presses, mixers etc.

### Fines
Fines often have a different impact on processes and products than the fibres. Primary fines are available before beating and include ray cells. Primary fines have poor bonding properties. Secondary fines are created during beating and they improve the strength of the sheet. Both types of fines have a negative impact on the dewatering capacity on the paper machine.

### Coarseness
Units of coarseness are used to express fibre wall thickness as weight per length unit. For example, low coarseness means good sheet formation while high coarseness means good drainage and high sheet bulk.

### Technical specifications

| **L&W Pulp Tester Fiber Morphology – code 966** | |
|---|---|
| Results | See L&W Fiber Tester, code 912 |
| Supply | See L&W Pulp Tester Sample Preparation, code 961 |
| Options | - L&W Fiber Tester Blend, code 930 |
| | - L&W Fiber Tester Vessels, minishives and kink, code 931 |
| Dimensions | 520 × 1860 × 660 mm |
| | 20.5 × 73.2 × 26.0 in |
| Weight | 81 kg |
| | 178.6 lb |
| **Applicable standards** | |
| Fibre length: ISO 16065-2 | |

For more information, please contact:

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