Lorentzen & Wettre Products
Paper testing
Laboratory paper testing

In all types of mature production, improvements are required for a company to stay competitive. In the pulp and paper industry the goal is to produce a product within given specification at the lowest possible cost – standardized paper testing is one way getting there. Lorentzen & Wettre provide the industry with a wide range of measuring equipment for paper quality control.
Surface properties

Paper is a complex product. When printing, the result depends not only on the surface roughness, but also on absorption, permeability, formation and thickness, not to mention things beyond the papermaker’s control, like the printing ink, the printing press, and the human factor.

**L&W Micrometer**
gives precise thickness measurements of paper, board, corrugated board and tissue. It combines the latest materials and manufacturing procedures to ensure accurate measurements.

**L&W PPS Tester**
is used to measure the surface roughness of coated and calendared printing and writing paper. The results give a good overview of printability.

**L&W Moisture Tester**
measures the moisture content in pulp and paper products. It can be used for production control and verification of online systems and for back-up of online moisture sensors.

**L&W Air Permeance Tester**
uses the latest technology to measure air permeance in accordance with the most common measuring methods.

**L&W Gloss Tester**
measures gloss, which is an important property in the production of high print quality paper. High gloss gives print quality and contrast, but too high gloss can reduce the readability due to reflection.

**L&W Bendtsen Tester**
measures surface roughness of grades like newsprint and liner.

**L&W Cobb Sizing Tester**
measures the weight increase of a sample, when exposed to water for a given time.

**Elrepho** measures colour, brightness, opacity and whiteness of paper, paperboard, pulp, coating inks and fillers. The measurement conforms to all established standards for optical measurements.

**L&W Moisture Tester**
measures the moisture content in pulp and paper products. It can be used for production control and verification of online systems and for back-up of online moisture sensors.
Strength characteristics of paper products are of great importance. For example, printing paper must have good runnability through the printing press and a corrugated box must sustain high loads and stresses.

**L&W ZD Tensile Tester**
measures internal bond strength (a paper’s strength in the thickness direction). The test sequence is fully automated including tape application and removal.

**L&W Bending Tester**
measures a material’s resistance to bending. Designed for measurements of creased and uncreased paperboard.

**L&W Bursting Strength Tester**
measures bursting strength of paper, paper board, and corrugated board. Two different versions are available depending on testing standard.

**L&W Compressive Strength Tester STFI**
measures the compression strength of liner and fluting quickly and reliably. High compressive strength is important for good stacking ability of corrugated boxes.

**L&W Crush Tester**
is intended for various compression tests of liner, fluting and corrugated board. New properties such as flat crush hardness and the total energy absorbed during a FCT measurement can be measured.

**L&W Tensile Tester**
measures all important tensile properties, with precision to measure on tissue and it is strong enough to measure on packaging board. It is designed with attention to ergonomics and efficiency.

**L&W Tearing Tester**
measures tearing resistance according to the Elmendorf method. Pneumatic test-piece clamping and automatic calculations of the measured values, ensure stable and accurate test results.

**L&W Tensile Tester**
measures internal bond strength (a paper’s strength in the thickness direction). The test sequence is fully automated including tape application and removal.
There is no guarantee that the test results will be correct if the test specimens are not prepared in the correct manner, i.e. using precision, purpose built sample cutters and punches. To ensure successful measurement results, the proper sample preparation tools must be used.

L&W Sample Trimmer
can cut a 300 mm wide sample strip from most paper or board samples. This sample can then be tested in L&W Autoline or L&W TSO Tester.

L&W Strip Punch
provides you with precisely cut sample strips that can be used for tensile tests, fracture toughness tests, compression strength tests, RCT, CMT and CCT.

L&W ECT Cutter Billerud
prepares accurate samples of corrugated board for ECT testing. This tool, which cuts the edges parallel, is the established tool for preparing the edges of an ECT test-piece, regardless of standard.

L&W Profile Sample Cutter
cuts wrinkle-free sample strips, to a fixed width, directly from the machine reel that automatically wound onto a removable cylinder. These can be used for testing in in L&W Autoline or L&W TSO Tester.

L&W Sample Punch
creates accurate test-pieces for use in tearing tests, bending resistance tests, folding strength tests, or for brightness, opacity and colour testing in L&W Autoline.

L&W Circular Cutter
cuts circular test-pieces of paper, board and corrugated board for use in flat crush tests.
L&W Autoline is an automatic paper testing laboratory providing reliable, accurate and precise information about the quality and condition of the paper. This is possible because Lorentzen & Wettre has applied many years of paper testing knowledge to the problem of finding the best solution for testing paper automatically. The result, L&W Autoline, has become the most popular automated paper testing system in the world today.

L&W Autoline can perform almost all quality testing, prepare reports, archive data, and communicate with other devices that monitor process parameters with little operator involvement.

Furthermore, most of the measurement methods conform to well-established industry standards, thus maintaining the continuity of information obtained from previous testing instruments. All this while generating positive cash flow by improving quality and reducing costs.

Connection to a mill-wide information network ensures that the crucial information provided by L&W Autoline can be in the papermaker’s hands within minutes of reel turn up.

L&W Autoline is a proven solution at more than 350 locations worldwide.
L&W Autoline 400 from Lorentzen & Wettre is a testing system for paper profiles. The entire profile measurement is performed in an automatic sequence, and the results are presented immediately on a screen or a printer, in graphic form or as tables. Operation is very simple since all the settings can be preset. L&W Autoline 400 is configured with measurement modules that can be freely selected and combined for the desired cross-profile measurements. The majority of modules measure according to current industry standards.

L&W Autoline Sample Loading System automatically feeds papers into L&W Autoline. The operator only needs to put the paper samples in the cassettes.

L&W Autoline Sheet Feeding System feeds one sheet at the time into L&W Autoline, in which it is subsequently measured in the different modules. The sheet feeder can be filled with approx. 6,600 sheets.
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