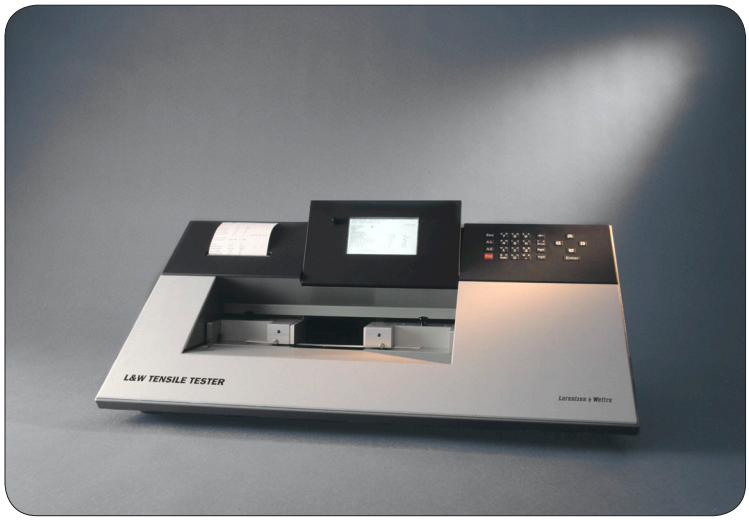
L&W TENSILE TESTER

BENEFITS

- Horizontal design for fast and relaxed testing
- Automatic compensation if the test piece is not stretched at the beginning of measurement
- Measures in accordance with all established standards
- Superior clamp design. A metal cylinder clamps the test piece against a plane surface for exact test length and to prevent slippage
- In accordance with new ISO 1924-3 standard
- Three load cells to choose from
- Automatic starting of measurement when the test piece is in the correct position



L&W Tensile Tester is designed with an emphasis on ergonomics and high performance.

L&W Tensile Tester measures all the important tensile properties of paper and board. Tensile strength indicates the load carrying capacity, tensile stretch the forgiveness during i.e fluctuation loads. Tensile Energy absorption is good for sacks and tensile stiffness describes the limit when the fiber and its bonds start to break.

Lorentzen & Wettre's tensile tester measures the tensile strength, stretch at break, tensile energy absorption and tensile stiffness of paper and board. L&W Tensile Tester has a very wide measuring range, which makes it suitable for measuring a wide range of paper and board, everything from newsprint to the strongest kraftliner. The instrument is very fast. In some cases it takes only 10 seconds from starting the measurement to the finished report.

Proven measurement technology

L&W Tensile Tester is Lorentzen & Wettre's third generation of horizontal tensile testers since 1975. 'Horizontal' measurement has been demonstrated to be a reliable and easy way to determine the tensile properties of paper.The instrument comprises a fixed and a moveable clamp. A load cell is attached to the left clamp, and the right clamp is used to pull the test piece at a predetermined speed. The clamps consist of a cylindrically shaped surface that clamps the test piece against a flat surface. This guarantees a well-defined test length. The clamps close automatically when the test piece is correctly positioned. The test piece is then pulled until it breaks. The measurement results are then presented on the graphic display either in table form or as a measurement curve. The result can also be printed on the built-in printer or exported to a PC.

Select standard and measurement value

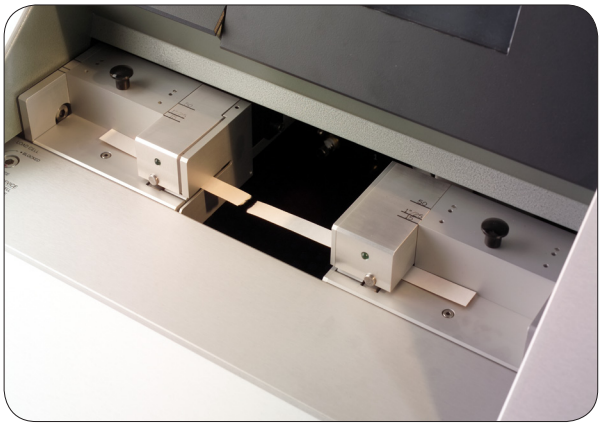
The instrument is designed for use with three different sample widths depending on the standard chosen. With a simple operation, you can switch between the options. The user also has the option of selecting how the measurement values shall be presented, with both SI or foot-pound unit options available. In a single test, four basic properties can be calculated. These are tensile strength, stretch at break, TEA and tensile stiffness. Moreover, from these a further eight industry-standard properties can be calculated and reported.

Simple set-up

It is easy to get started. There are pre-programmed measurement settings for a number of commonly used measurement standards. The instrument has a large number of interface languages to choose from, to facilitate use of the instrument. There are options for optimizing the measurement process, e.g., selecting the number of test samples, what properties shall be reported, removal of rejected tests and more.

L&W Tensile Tester also takes care of problems commonly encountered when handling test pieces. For example, if the test piece is not fully stretched when measurement is started, the instrument solves this problem by measuring how much the clamp moves before the sample is loaded. Thereafter the measurement starts and the result is calculated.

Loading the test piece. A light sensor detects the test piece and measurement starts.



After the test piece breaks, the clamps return to the start position.

Specification	
L&W Tensile Tester – Code 062	
Inclusive	Foot switch
Measurement	
Range (force)	3–750N (0.67–170 lbf)
(Strech at break)	64% max at 100 mm (4 in), 17% max at 180 mm (7.1 in)
Instrument	
Testing velocity	2–100 mm/min (0.08–4 in/min)
Test span	100 mm and 180 mm (4 in and 7.1 in)
Clamping force	1000–6000 N (225–1350 lbf)
Test piece width	15, 25 or 50 mm (0.6, 1.0 or 2.0 in) without the need for changing clamps
Results	
	Measurement values (in SI or FPS units) - tensile strength - max. force - breaking length - strain at break - elongation - elongation at 2/3 of max. force - tensile energy absorption - tensile stiffness - Emodulus (Young's modulus) *Statistics* - indexed results - arithmetic mean value - median value - standard deviation - coefficient of variation - MD/CD ratio of arithmetic mean value or median - geometric mean value of the arithmetic mean value or median
Connections	
Data	- RS232C - connectable to L&W Autoline Data Acquisition Workstation
Printer	Parallel
Installation requirements	
Power	100 W
Instrument air	0.6–1 MPa (75–150 psi)
Option	Range 0.5–150 N or 7–1500 NCalibration equipment

Dimensions	0.8 × 0.5 × 0.3 m 31 × 21 × 12 in	**Volume**	0.3 m^3 11 ft^3
Net weight	49 kg 106 lb	**Gross weight**	65 kg 143 lb

Applicable standards
APPITA/AS 1301.448, BS 4415, CPPA D.34, DIN 53112 teil 1, EN ISO 1924-2, ISO 1924/2, ISO 1924/3,JIS P8113, SCAN P 38/P67, TAPPI T494

Lorentzen & Wettre