



StandAlone

Article No. S815020000

Horizontal TENSILE TESTER

for:



For an accurate and fast measurement of all parameters with dry and wet samples of paper, board and tissue



Most important benefits

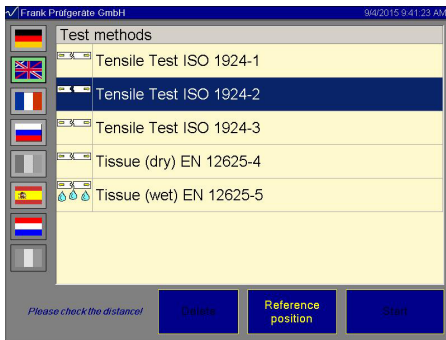
- ✓ **PLUG AND PLAY**
thanks to five pre-installed test programmes for immediate measurements in accordance with the most important paper standards.
- ✓ **AUTOMATIC RATIO CALCULATION**
instead of a time-consuming manual calculation of the tensile strength difference between fibres in machine direction and cross direction (MD/CD).
- ✓ **AUTOMATIC SAMPLE IDENTIFICATION**
guarantees that the variation of the measurement values is very small. Since the measurement surfaces are not touched by the operator, falsifying influences are eliminated.
- ✓ **PNEUMATIC SAMPLE CLAMPING**
improves the comparability of the measurement data because each sample is clamped with the same contact pressure.
- ✓ **GRAPHS SHOWING THE MEASURING PROCESS**
make it easier to recognise deviations when measuring several samples.

PRODUCT DESCRIPTION

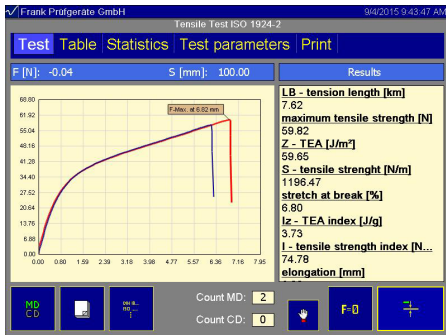
FRANK-PTI's horizontal tensile tester is one of the leading products of its kind. Its ergonomic design with touchscreen simplifies operation and reduces the testing time. The robust and reinforced construction helps to avoid falsifying influences like vibrations etc. This makes the results reliable even if measurements are repeated or done simultaneously. These optional features are available: tub for strength measurements with wet samples and a calibration device for performing self-tests of the load cell.

TEST DESCRIPTION

The measurement starts immediately because of the pre-installed measurement programmes. Select a test method and insert the sample support into the automatic sample clamps. Now the tester checks all the various sample parameters and determines whether the sample is an MD or CD strip. The tester identifies the test strip automatically when the sample is inserted. It starts the tensile test and completes it when the sample breaks. The sample clamps return to their initial position. The measurement results are displayed on the touchscreen. There is this practical feature: If you did various tests in MD and CD, you can compare the results in a statistics and display the ratios. It is possible to delete single measurements from the statistics.



Test methods are selected via the touchscreen



Output of test-relevant values and graphs

Calculations	LB - tension length [km]	maximum tensile strength [N]	Z - TEA [J/m ²]	S - te
average	7.48	59.68	55.85	
minimum/maximum	7.33/7.62	57.54/59.82	52.04/59.65	
standard deviation	0.21	1.61	6.39	
Var. Coef. %	2.74	2.75	9.64	

Statistics menu displaying MD/CD ratio



Test strip submerges in the water with pre-determined break point



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TECHNICAL DATA

DEVICE/INSTRUMENT

- Wet and dry tensile tests are possible
- Automatic sample identification
- Pneumatic sample clamp with flat standards-compliant head
- Pneumatic sample clamping - clamping force adjustable from 100–7000 N
- Test can be started automatically or, alternatively, by pressing the start button
- Easy insertion of the sample because of open construction
- Touchscreen operation
- Maximal sample path: 300 mm
- Test speed is adjustable from 1–200 mm/min
- Accuracy: better than 1 % within 1–100 % of the nominal load
- Display of results according to the selected standard, statistics functions and MD/CD
- No sagging of the samples because of the sample support
- Automatic return of the clamps after the test
- MD and CD measurements with ratio calculation
- Compatible to ProbeNet

MEASUREMENT

Force sensors	100, 200 or 500 N
Sample widths	15/25 and 50 mm
Standard sample lengths	100 mm and 180 mm (50 mm optional)
Pre-set test programmes	ISO 1924-2 and -3 for 100 mm-long samples and former ISO 1924-1 for 180 mm-long samples

RESULTS

Maximum force	[N]
Tensile strength	[N/m, kN/m]
Tensile energy absorption index	[J/m ²]
Tensile strength index	[Nm/g]
Tensile energy absorption index	[J/g]
Stretch at break	[%]
Wet tensile strength	[%]
Relative wet tensile strength	[%]
Breaking time	[s]
Breaking length	[km]
Elongation	[mm]
Modulus of elasticity	[N/mm ²]
Tensile stiffness	[KN/m]
Tensile stiffness index	[MNm/KG]

CONNECTIONS

RS232
Printer

INSTALLATION REQUIREMENTS

Power supply	110–230 V, 50–60 Hz
Compressed air	400–600 kPa

DIMENSIONS & WEIGHT

Dimensions (WxDxH)	57x52x24 cm
Net weight	38 kg

APPLICABLE STANDARDS

ISO 1924-1, -2, -3	TAPPI T494, T456	DIN 53112/1, DIN EN ISO 12625-4 and 5
Scan P38, P67	PAPTAC D34	APPITA/AS 1301.448