

UNIVERSAL TESTER

For various tensile and pressure tests.

- › Robust construction with one frictionless spindle
- › Easy operation via the touch screen
- › Changeable force sensor
- › Quick clamp return after test



Applicable standards

- › ISO 1924-1 | -2 | -3
- › DIN 53112-1
- › TAPPI T494, T456
- › SCAN P38, P67

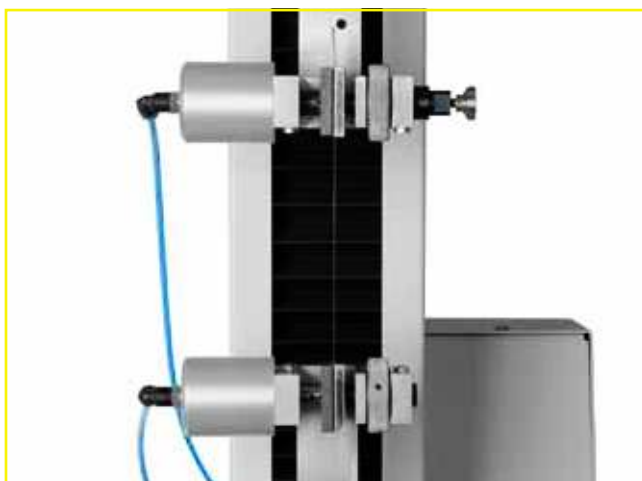
etc.



Easy operation via the pivorable touch screen



Changeable hand clamps



Optional: pneumatic clamps

Technical data

Electrical connection	110 – 230 V / 50 – 60 Hz
Water connection	No
Compressed air	400 – 600 kPa (pneum. clamps)

Device description

The universal tester has been specially developed for different tensile and pressure tests on various materials (paper, board, tissue) and is outstanding in its ease of use and high levels of accuracy, even under heavy loads. The sample holder and the load cell can be exchanged according to requirements. The unit is operated via a rotatable touch screen, from which the different test methods can be selected, and which also displays values and curves. To prevent wear to the touch screen, the start and stop buttons are mounted separately on the unit. The universal tester is equipped with the standard FRANK-PTI connection (see page 12).

Test description

The load cell and sample holder required for the selected test procedure are attached to the test unit, and the corresponding test program is selected from the touch screen. After a brief reference operation, the sample is tensioned and assigned a test series (MD/CD) via the touch screen. The test procedure is begun by pressing the start button. When the test is complete, the upper sample clamp travels automatically to the start position and the test strip can be removed. The test results are displayed numerically and graphically on the touch screen. If more than one MD and CD test is carried out, the results can be compared and displayed as a ratio.

Specifications

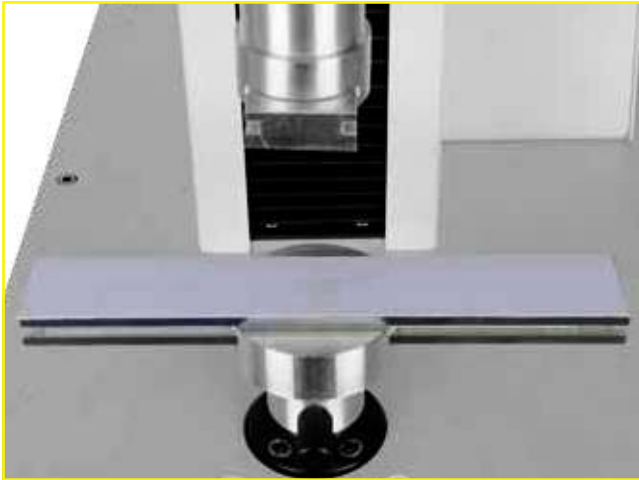
- ✓ Robust construction with one frictionless spindle
- ✓ Easy operation via the touch screen
- ✓ Test strips distinguishable into test series (e.g. MD/CD)
- ✓ Automatic ratio calculation and display of statistics
- ✓ Changeable force sensor
- ✓ Testing force up to 2,000 N
- ✓ Quick clamp return after test
- ✓ Separated start button
- ✓ FRANK-PTI standard-ports (see page 12)
- ✓ Compatible with ProbeNet (see pages 254 – 257)
- ✓ Included into delivery: manual sample clamps

Models

- ▶ Available working heights:
 - 450 mm
 - 650 mm
 - 950 mm
- ▶ Available force sensors:
 - 50 N • 100 N • 500 N • 1,000 N • 2,000 N
- ▶ Available sample devices:
 - Paper: see pages 79 – 81
 - Board: see pages 154 – 155
 - Tissue: see pages 164 – 165

Z-DIRECTION

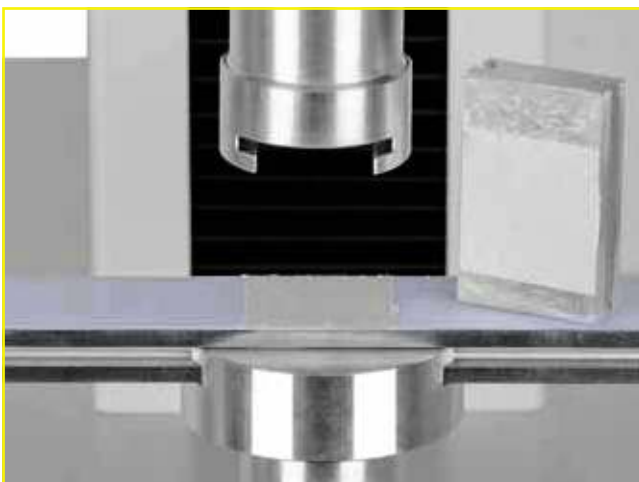
ISO 15754 & TAPPI T541



Z-direction support and test stamp



The sample is cut with a sharp knife to the left and right



Part of the sample remains affixed to the stamp

Sample preparation

Double sided adhesive tape is attached to the support platen (200 x 31.63mm). To this a 200 x 31.63 mm sample is attached. The sample in turn is affixed with double sided tape and the support platen is brought to the first test position. The first of five test stamps of a size of 50 x 31.63 mm is clamped into the upper holder.

Test description

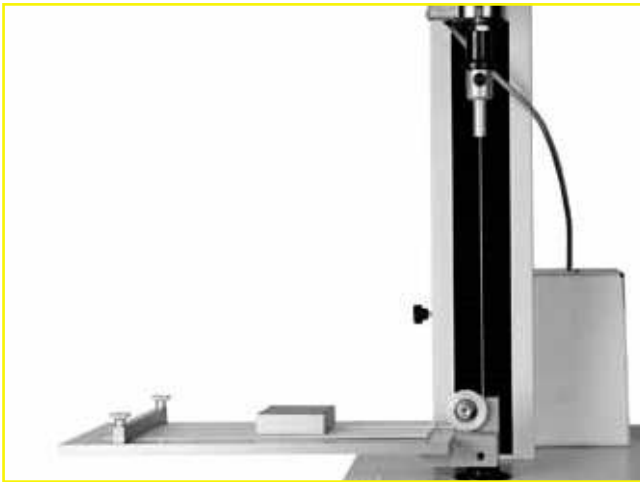
The start button is pushed and a test stamp with an area of 1,000 mm² (± 10 mm²) travels down from above and is pressed with a force acc. to standard on the sample. A sharp knife is used to cut the sample to the left and right of the stamp. After pushing the start button again the stamp is raised from the sample, ripping the sample in the Z-direction. Part of the sample remains affixed to the stamp, the other part on the support platen.

The support platen is now moved 35mm and the upper platen of the stamp is changed so that further tests can be carried out. The z-direction test is carried out in five positions on the same sample.

The test results are displayed graphically in a curve on the touch screen. One set of statistics can be set to show the maximum, minimum, average and standard deviation of the five tests carried out.

After five consecutive tests, the base platen and the exchangeable upper platens are cleaned of the remaining adhesive tape and are available for further tests.

UNIVERSAL TESTER ACCESSORIES



Friction table

Friction Table according to ISO 15359

To determine the coefficients of friction between two materials (static and dynamic).

A sheet of paper is clamped on the abrasion table. A metal block with the abrasive material attached to the underside is placed on top. The metal block is attached to the load cell via a cable. Pressing the start button draws the block over the sheet attached to the abrasion table. The measured values are displayed as a real-time curve on the touch screen of the universal tester.

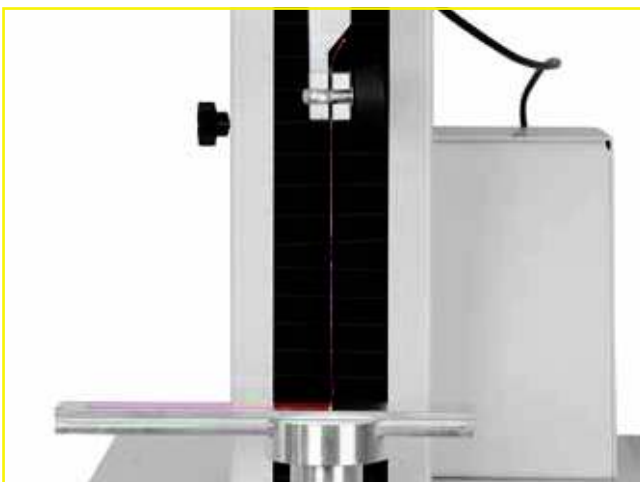


3-Point-Bending

3-Point-Bending according to ISO 5628

To determine flexural strength.

The material for testing is placed on the two supports. The distance between the supports can be set as required. Pressing the start button moves the compression bar down and applies a central load to the test strip. As soon as the predefined force or desired distance is reached, measuring stops and the compression bar travels back to the start point. The measured values are displayed on the universal tester's touch screen as a real-time curve.



Peeltest Finat 2

Peeltest Finat 1, 2, 3

To determine the adhesiveness of adhesive tape.

The adhesive tape to be tested is attached to the base platen and its end is clamped. Pressing the start button moves the clamp upwards. This pulls the adhesive tape from the base platen and the adhesive force is determined. The measurements are displayed on the touch screen in a real-time curve.

Peal mechanisms for the peel test Finat 1, 2 or 3 are available.