



StandAlone

UNIVERSAL TESTER

For various tensile and pressure tests.

For:



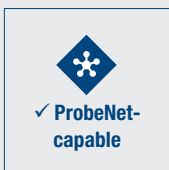
✓ PAPER



✓ BOARD



✓ TISSUE



MODELS

AVAILABLE WORKING HEIGHTS

450 mm, 650 mm, 950 mm

AVAILABLE FORCE SENSORS

10 N, 50 N, 100 N, 200 N, 500 N, 1 kN, 2 kN

AVAILABLE SAMPLE DEVICES

Paper, board, tissue

MOST IMPORTANT BENEFITS

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

FRANK-PTI
QUALITY TESTING INSTRUMENTS

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PRODUCT 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.

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.

TECHNICAL DATA

DEVICE/INSTRUMENT

- 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 6)
- Compatible with ProbeNet (see pages 78 – 81)

INSTALLATION REQUIREMENTS

Electrical connection	110 – 230 V / 50 – 60 Hz
Water connection	No
Compressed air	4 – 6 bar (pneum. clamps)

APPLICABLE STANDARDS

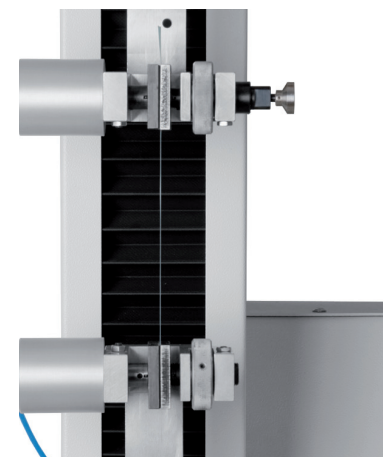
- DIN ISO 1924-3
 - ISO 1924-2
 - TAPPI T494, T456
- etc.



Easy operation via the pivotable touch screen



Changeable hand clamps



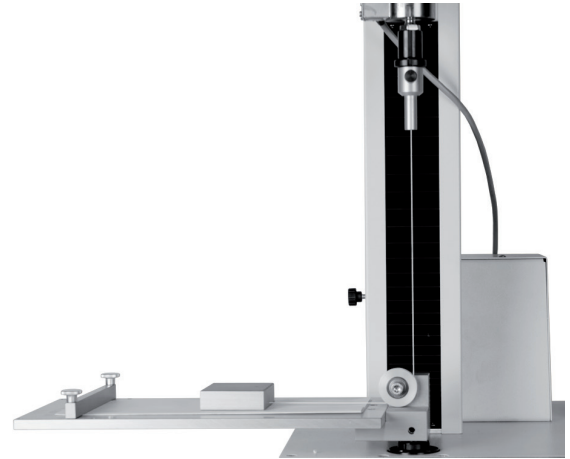
Optional: pneumatic clamps

ACCESSORIES FOR PAPER

FRICTION TABLE

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.



Friction table

3-POINT-BENDING

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.



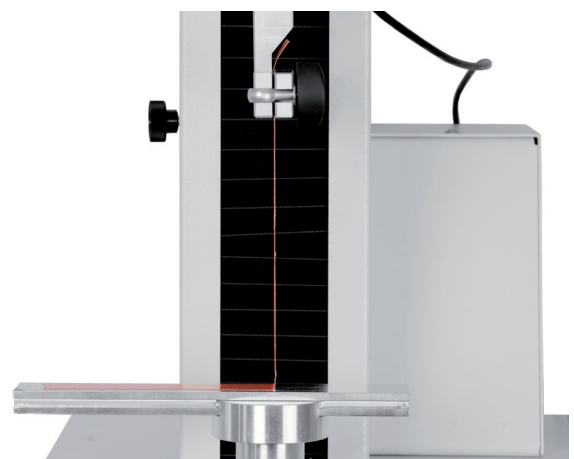
3-Point-Bending

PEELTEST

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.

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



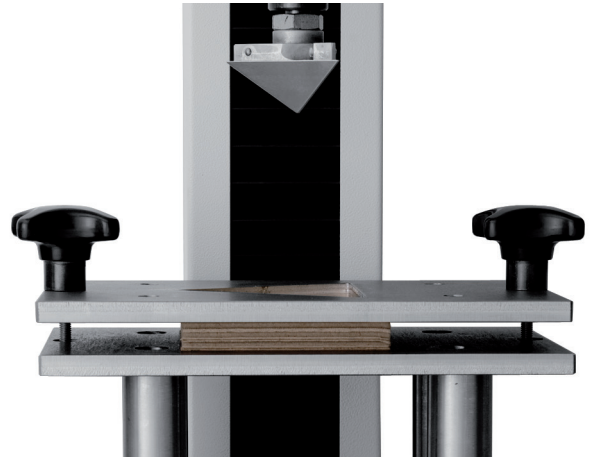
Peeltest Finat 2

ACCESSORIES FOR BOARD

PUNCTURE TEST

To determine the energy used during static puncturing of board and corrugated board.

The same puncture head is being used as in the puncture tester. During the static procedure, the sample is clamped into the sample holder. Pushing the start button sets the puncture head in motion down onto the sample from above at 200 mm/minute and punctures the sample. The measurement values can be read from the touch screen of the universal tester from a real-time curve.

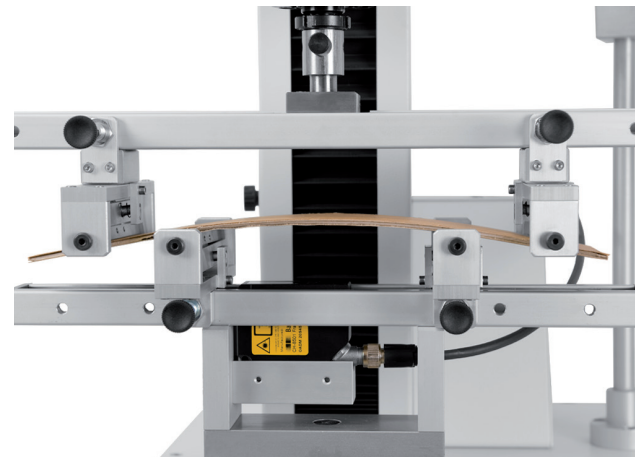


Sample support for the Puncture Test

4-POINT-BENDING

To determine flexural strength.

The material for testing is placed on the two supports. The distance between the supports is 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.



4-Point-Bending

SCORE QUALITY TEST (SQT)

To determine the score quality of corrugated board.

The prepared 25.4 mm sample is fluted, in MD or CD as required, and placed in the sample holder. A compression bar applies pressure to the corrugation in the middle of the corrugated boards until this is pushed downwards at least 12.7 mm, or the angle between the two sides reaches 90°. The measured values are displayed on the universal tester's touch screen as a real-time curve. The force required is compared with force used in a test with uncorrugated board. This procedure allows the score quality to be determined.



Sample support for the Score Quality Test (SQT)

ACCESSORIES FOR TISSUE

BALL BURST TEST

To determine the burst strength of tissue.

The tissue sample is clamped into the sample mechanism using quick clamps. The distance between polished plunger and the sample support is set automatically when a program is selected. Pushing the start button causes the plunger to travel downward at a defined speed and apply a load to a point on the tissue sample until it breaks. Then the plunger travels automatically back to the start position. The measured values can be read from the touch screen of the universal tester as a real-time curve.



Sample support for the Ball Burst Test

WET TENSILE STRENGTH TEST (FINCH TEST)

To determine the wet tensile strength of tissue.

The tissue sample is pulled one time over the sample mechanism bar, above the water container, and clamped at both ends into the sample holder above using the quick clamps. The water container is lifted upwards by hand and returned to the start position 15 seconds later. Pushing the start button initiates the wet tensile test. The sample holder moves upwards continuously until the sample breaks at the bar. The values can be read from the touch screen as both numerical results and graphically. If more than one test in MD and CD is carried out, their statistics can be compared and displayed as ratio.

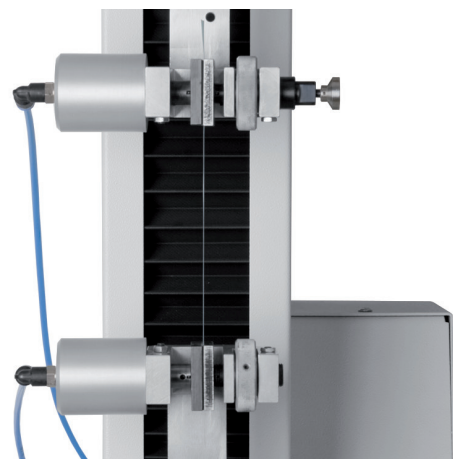


Sample support for the Wet Tensile Strength Test (Finch)

DRY TENSILE STRENGTH TEST

To determine the dry tensile strength of tissue.

The touch screen is used to select the appropriate program, and the upper sample clamp travels automatically to the correct start position, so that the clamps are a distance acc. to standard apart. The test strip is then clamped into the sample clamps. Pushing the start button initiates the tensile strength test. The upper clamp moves upwards until the sample breaks. The values can be read from the touch screen as numerical results as well as graphically. If more than one test in MD and CD is carried out, their statistics can be compared, and displayed as ratio.



Pneumatic clamps for the Dry Tensile Strength Test

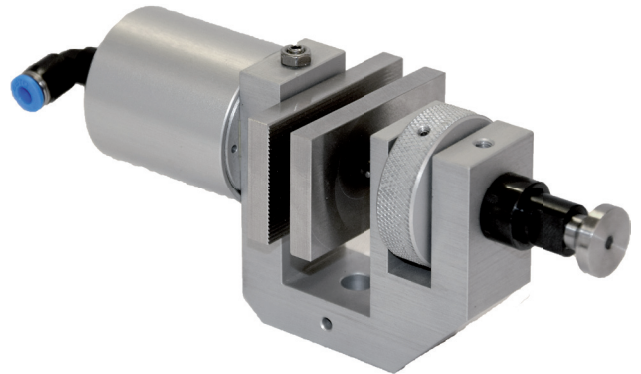
The universal tester is delivered with hand clamps as standard. Optionally, pneumatic clamps are available.

CLAMPS

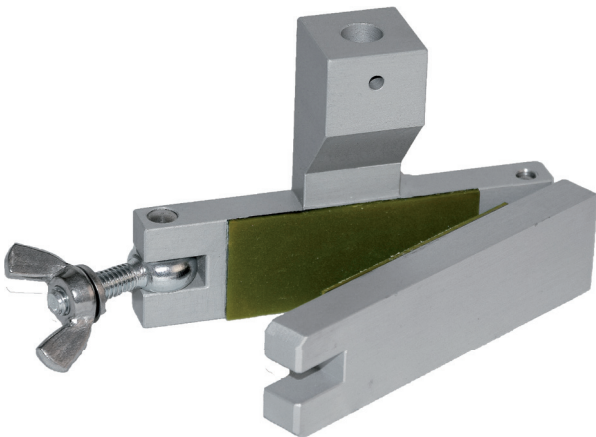
PNEUMATIC CLAMP up to 7 kN



PNEUMATIC CLAMP up to 2 kN



SCREW TYPE GRID HEAD
up to 200 N



SCREW TYPE GRID HEAD
up to 1 kN

