

MOST IMPORTANT BENEFITS

- Robust construction with two frictionless spindles
- \checkmark Easy operation via the touch screen
 - Pressure plates with frictionless guidance guarantee high plan parallelism
- ✓ Testing force up to 5,000 N

PRODUCT DESCRIPTION

The crush tester has been specially developed for crush tests on various materials (paper, board, etc.) and is impressively simple to operate. Its robust construction and two frictionless spindles guarantee high measurement accuracy, even under very heavy loads. The platens included are specially constructed to ensure the least possible deviation from the parallel. There are sample holders for different test procedures available as options (see pages 64 - 65). The unit is controlled via a touch screen, where the individual testing methods can be selected, and values and curves displayed. To avoid wear to the touch screen, the start and stop buttons are located separately. The crush tester is equipped with the FRANK-PTI standard connector.

TEST DESCRIPTION

The sample is placed, with or without sample holder depending on test procedure, between the platens. The appropriate test program is selected on the touch screen. The platens automatically travel to the correct start position. Pressing the start button causes the platens to compress the sample at a preset speed. On reaching the preset test criteria (depending on the test procedure, breaking of the sample or a preset distance) measuring stops and the platens automatically travel back to the start position. The test results are displayed both numerically and graphically on the touch screen. If more than one run of one of the two test series (MD/CD) is carried out, they can be statistically compared and displayed as ratios.

TECHNICAL DATA

DEVICE/INSTRUMENT

- Robust construction with two frictionless spindles
- Workspace for sample intake : 125 x 120 x 110 mm (WxDxH)
- Easy operation via the touch screen
- Test strips distingishable into test series (e.g. MD/CD)
- Automatic ration calulation and display of statistics
- Testing force up to 5,000 N
- Testing speed up to 200 mm/min adjustable
- Fast returning of the platen after the test
- Seperated start button
- Overload protection due to a spring pack
- FRANK-PTI standard-ports (see page 6)
- Compatible with ProbeNet (see pages 84 87)
- Included into delivery:
- Pressure platens (195 x 120 mm) with frictionless guidance
- Optional available:
 - 4-Point-Bending bridge with associated software
 - Variable sample holders (see page 64 65)

INSTALLATION REQUIREMENTS

Electrical connection	100 – 230 V / 50 – 60 Hz
Water connection	No
Compressed air	No

APPLICABLE STANDARDS

- DIN EN ISO 3035, 3037, 7263
- ISO 12192, 13820
- TAPPI T809, T811, T821, T822, T825, T829, T838, T839, T843



Pressure platens with frictionless guidance



Optional available: 4-point-bending bridge

CRUSH TEST METHODS

RING CRUSH TEST (RCT)

To determine ring crush resistance.

A 152.4 x 12.7 mm paper or board sample, prepared with the strip punch, is inserted, long edge uppermost, into the sample holder and placed in the crush tester. Different sample holders are available for different material thickness.

In the RCT test, the test strip is exposed to compression until it buckles. The force measured indicates how much force is required to finally break them.



Sample holder for the Ring Crush Test (RCT)

CONCORA CRUSH TEST (CCT)

To determine the crush resistance of flutes.

A 152 x 12.7 mm sample, prepared with the concora fluter is placed in the sample holder of the crush tester with the long edge uppermost. Different sample holders are available for different flute sizes.

In the CCT test, the flute is exposed to compression on the long edge until it buckles. The force measured indicates how much force is required to break the fibres.



Sample holder for the Concora Crush Test (CCT)

EDGE CRUSH TEST (ECT)

To determine the edge crush resistance of corrugated board.

A 100 x 25 mm sample, prepared with the ECT sample saw is placed long edge uppermost in the crush tester between two metal blocks. The two blocks prevent sideways slippage of the sample during the crush test.

In the ECT test, the corrugated board is exposed to compression until it buckles. The force measured indicates how much force is required to finally break them.



Sample holder for the Edge Crush Test (ECT)

Article No. S18502

SCORE QUALITY TEST (SQT)

To determine the score quality of corrugated board.

The prepared 25.4 mm sample is rilled, in MD or CD as required, and placed in the sample holder.

In the SQT test, a compression bar applies pressure to the rilling line 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 force required is compared with force used in a test with uncorrugated board. This procedure allows the score quality to be determined.



Sample holder for the Score Quality Test (SQT)

PIN ADHESION TEST (PAT)

To determine the adhesion bond strength of corrugated board.

The pins of the holder for the PAT test are inserted through the flutes of the corrugated board in such a way that the lower holder presses the flute upwards and the upper holder pushes the lower linerboard downwards. Sample holders are available for different flute sizes.

In the PAT test, force is applied to the inner side of the linerboard until the bond is broken between the board and the adhesive. The measured values indicate how much force must be applied to break the bond between linerboard and flutes.

CONCORA MEDIUM TEST (CMT)

To determine the crush resistance of concora flutes.

The 152 x 12.7 mm sample prepared with the concora fluter is glued with the aid of the third hand and placed between the platens of the crush tester.

In the CMT test, the flutes are exposed to compression until they buckle. The force measured indicates up to which point the fibres recover or when they can no longer return to their original shape and how much force is required to finally break them.



Sample holder for the Pin Adhesion Test (PAT)



Concora Medium Test (CMT)