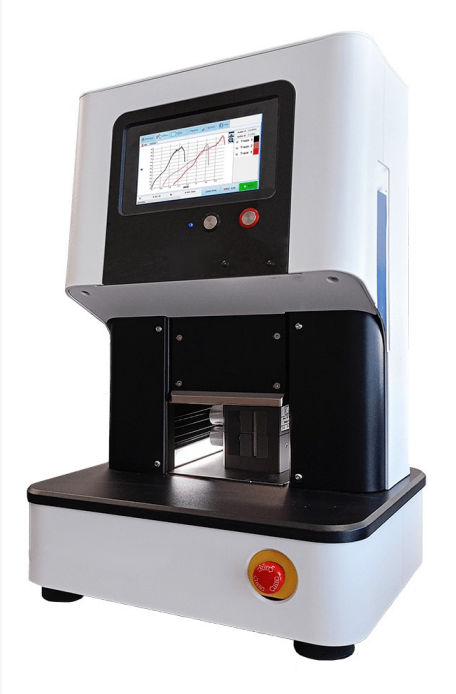
Sample Crush Tester

Compression tester for paper and corrugated board

One instrument for the full range of crush and compression tests on paper, board and cores.



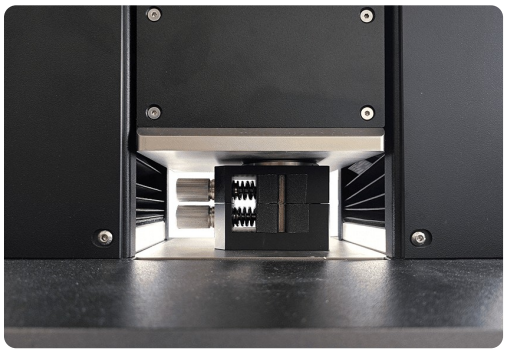
The Sample Crush Tester performs a wide range of compression tests on paper, corrugated board, cores and similar materials. By exchanging the sample holder accessory, the same instrument runs RCT, CMT, ECT, CCT, FCT, PAT and SQT tests. Sample holders are not included.

A high-rigidity steel and aluminium frame, a DC servo motor with high-accuracy ball screw and optical encoder plate positioning provide precise, repeatable measurements up to 5,000 N, with an accuracy better than 1 % of the applied force between 2 % and 100 % of full scale.

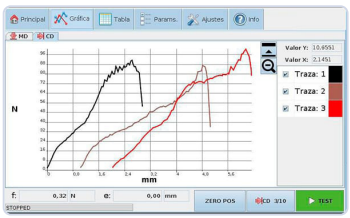
Tests are run and configured from a 7" colour touchscreen with pre-programmed TAPPI and ISO test methods, custom tests, statistics and graphical results. Results can be exported as PDF or Excel files over Ethernet, printed, or saved to a USB drive – no software required.

Applicable standards: ISO 3035, ISO 3037, ISO 11093-9, TAPPI T808, T809, T811, T818, T821, T825, T839, FEFCO Nº 6, 8 & 11, AFNOR 23035, etc.

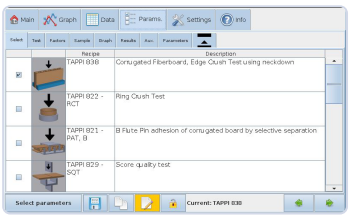
5,000 N	0.004 %	1–150	7"
Measuring range	Force resolution (of FS)	Test speed (mm/min)	Colour touchscreen



Compression zone with sample holder fitted



Touchscreen: graphical display of test results



Touchscreen: pre-programmed test methods

Specifications

Applications	Compression tests on paper, corrugated board, cores, etc.
Test types	RCT, CMT, ECT, CCT, FCT, PAT, SQT via interchangeable sample holders (not included)
Applicable standards	ISO 3035, ISO 3037, ISO 11093-9, TAPPI T808, T809, T811, T818, T821, T825, T839, FEFCO Nº 6, 8 & 11, AFNOR 23035, etc.
Measuring range	0 – 5,000 N
Force units	Newtons, kilograms, pounds
Force resolution	0.004 % of FS
Accuracy	< 1 % of the applied force, between 2 % and 100 % of FS
Max. travel lower plate	140 mm (other travels on request)
Extension units	Millimetres, inches
Extension resolution	0.01 mm
Plate positioning	Optical position encoder
Compression plates	150 x 150 mm
Test & approach speed	1 – 150 mm/min
Drive	DC servo motor with high-accuracy ball screw
Frame	High-rigidity steel and aluminium
Display	7" colour touchscreen
Overload protection	Electronic (programming) and physical (limit switches)
Interfaces	USB type B for test control and management software; USB for maintenance and USB printer; Ethernet
Safety & installation	Emergency push button, protective bellows for the drive mechanism, adjustable levelling supports
Electrical supply	220/110 V, 50/60 Hz
Dimensions (W x D x H)	405 x 430 x 665 mm
Packing box (W x D x H)	710 x 500 x 990 mm
Net / gross weight	65 kg / 120 kg
Compliance	CE marked

Key Features

User interface

- Full control via touchscreen and two auxiliary buttons – the instrument operates fully stand-alone
- Pre-programmed ECT, RCT, PAT, CMT, CCT, FCT and SQT tests to TAPPI and ISO standards
- Custom test creation
- Intuitive menu, available in multiple languages

Results & statistics

- Two result tables, each with up to 10 result types and 20 test results
- Graphical display of test results
- Statistics: mean, standard deviation, minimum and maximum
- Configurable units for force, extension and speed

Test control

- Programmable break and preload levels
- Automatic return to the initial test position at maximum speed (150 mm/min)
- Electronic and physical overload protection

Connectivity

- Ethernet output to a network: test results transferred as PDF or Excel® files, no software needed
- Connect a printer or transfer results automatically to a USB drive
- Periodic program updates at no additional cost

Robust construction

- High-rigidity steel and aluminium frame
- DC servo motor with high-accuracy ball screw
- Protective bellows for the drive mechanism
- Adjustable supports for levelling

Safety

- Emergency push button
- Programmable overload limits plus physical limit switches
- CE marked

How a Test Works

1
Positioning

Once the selected test is loaded, the instrument automatically moves to the programmed distance for the accessory used. The sample holder with the sample is placed in the centre of the lower plate.

2
Sample compression

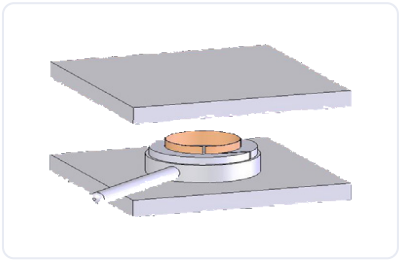
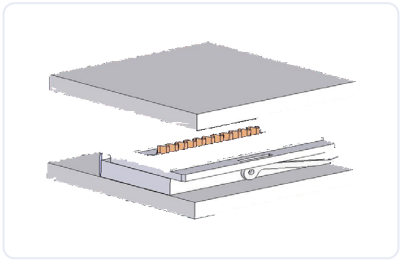
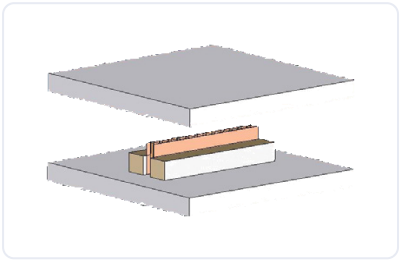
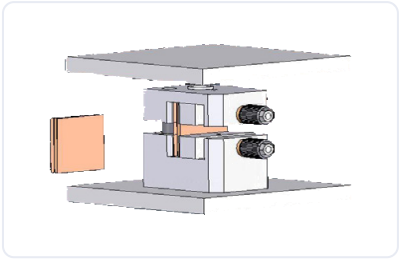
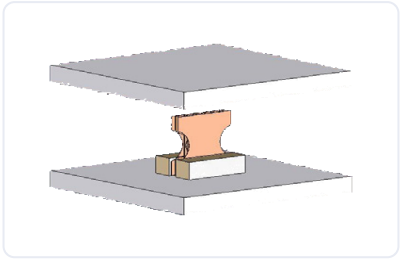
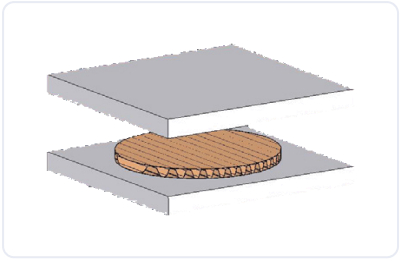
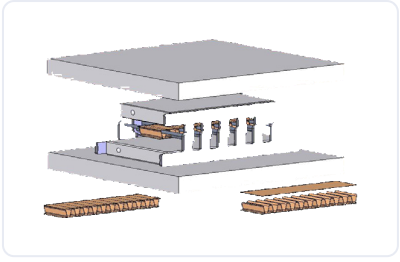
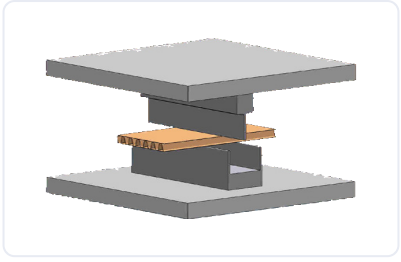
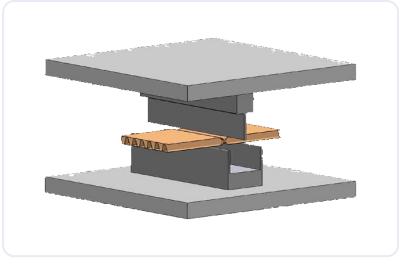
When the test starts, the lower plate moves towards the upper plate until the sample is compressed. The compression force is measured by a precision load cell coupled to the upper plate.

3
Breakage detection

As soon as sample breakage is detected, the lower plate returns to its starting position at maximum speed, ready for the next test.

Interchangeable Sample Holders

Exchanging the sample holder accessory turns the instrument into a dedicated tester for RCT, CMT, ECT, CCT, FCT, PAT and SQT. Sample holders are optional and not included.

Control Software (Optional)

The instrument can be connected to a PC to capture and manage tests with the optional control software, which also supports compatible instruments with a PC USB/RS-232 data output (availability on request).

- Data capture, saving and retrieving tests, report generation
- Export to PDF, Excel and CSV
- Result templates with different units and specification limits per test, product or customer
- Simultaneous capture from multiple instruments
- Control of stacking tests and programmable stage tests

Contact Optimus Instruments for more detailed information.