

PCA Score Bend Tester

Score Bend & Opening Force

Versatile force testing for paperboard and scored carton stock, built to support production and packaging quality control.



The 1270 PCA measures the force required to open or bend paperboard and scored cartons. This data supports accurate machine settings on form, fill and seal lines and helps evaluate carton runnability and quality control. Aligning specifications between producer and packager reduces rework, rejects, and downtime.

The tester also measures spring-back after folding, providing key data for sealing and gluing operations.

4

Interchangeable test fixtures

0–90°

Bend angle measurement
range

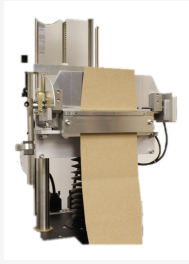
±0.25%

Force accuracy (10–100%
load)

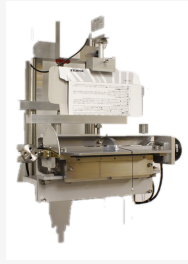
18 in

Max. flat sample size, opening
mode

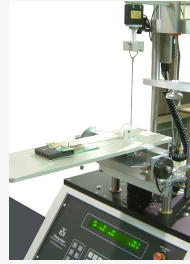
Test Modes & Fixtures



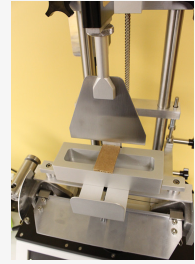
Opening Fixture



Bending Fixture



Score Quality Fixture



COF Fixture

Opening Force

Measures the maximum force required to open a flat, folded carton along its score lines.

Bending Force – TAPPI T577

The optional bending fixture measures the force required to bend a carton sample up to 90°, evaluating bending stiffness, the score ratio of scored versus unscored paperboard, and fold spring-back. A pneumatic, foot-pedal-operated clamp provides secure, repeatable clamping, and three reference plates are included to verify accuracy.

Score Quality – TAPPI T829

Measures the score quality of corrugated containers to TAPPI T829 when fitted to the 1270 PCA Score Bend Tester or the Vantage Series Universal Testing Machine.

Coefficient of Friction (COF)

Measures static and kinetic coefficient of friction over a 152.4 mm (6 in) travel distance. The platform mounts above the bending fixture for quick switching between bending and COF testing, with a variety of sample sleds available to suit different testing needs.

- Auto-zero & semi-automatic calibration
- Automatic return with overload protection
- RS-232 interface

Software Features

- Test modes for opening force, bending force & COF tests
- Statistics include average, high, low & standard deviation
- Spring-back of fold test
- Score ratio test mode of scored vs. unscored paperboard
- Test result & curve data for PC interface
- Optional Data Acquisition Software

Specifications

Dimensions	558.8 mm x 406.4 mm x 1219 mm (22 in W x 16 in D x 48 in H)
Shipping Dimensions	839 mm x 839 mm x 1321 mm (33 in W x 33 in D x 52 in H)
Net Weight	68 kg (150 lb)
Load Cells	500 g, 20 N, 50 N, 100 N
Force Accuracy	10% to 100% load capacity: $\pm 0.25\%$ of measuring value. Less than 10% load capacity: $\pm 0.025\%$ of load cell capacity.
Crosshead Speed	5 – 500 mm/min (0.2 – 20 in/min)
Air Pressure Requirements	75 psi / 5.2 bar
Angle Measurement Range	0–90° (selectable in 0.1° increments)
Angle Reading Resolution	0.36° or better
Position Measurement Accuracy	$\pm 0.1\%$ of full scale distance
Sample Size – Opening Force Mode	25.4 to 457.2 mm (1 to 18 in), when flat
Sample Size – Bending Force Mode	Up to 152.4 mm (6 in) sample width; up to 6.35 mm (0.25 in) sample thickness
Force Units	Grams, ounces, pounds, newtons, kilograms (selectable)
Distance Units	Inches, centimeters, millimeters (selectable)
Power Requirements	110-120 / 220-240 VAC @ 50/60 Hz
Power Consumption	Operating: 33 W. Standby: 28 W.
Fuse Rating	6 amp @ 110 V, 60 Hz; 3 amp @ 220 V, 50 Hz
Operating/Storage Environment	Air temperature 15° to 25°C (48° to 88°F); relative humidity 20% to 60% (non-condensing)
Output	RS-232, Parallel Port, Chart Recorder
Safety Features	Electronic overload protection system; angle over-travel limit switch; mechanical limit stops on upward and downward load cell motion; Emergency Stop button

Specifications subject to change without notice.