

# INTERNAL BOND TESTER

Printing and converting of paper and board is performed at high speed. A test which simulates those high speeds and forces is therefore a more reliable aid to the accurate prediction of a substrate's on-machine performance, than a slower non-dynamic z-direction test.

The internal bond tester supplies a repeatable method of checking for substrate failures that only occur at high speeds.

It is widely used for checking picking, blistering of coated offset papers, the effect of strength additives, delamination and other shock induced failures.

Solid pendulum with easily interchangeable, augmenting weights for selecting the most appropriate range. Magnetic pendulum release, to give consistent and repeatable pendulum drops, free from operator influence.

High quality, shielded open bearings ensuring minimal loss of kinetic energy for consistent sample press conditions.

As the test result depends on climate, the conditioned atmosphere is acquired at every measuring.

Large size back lit digital display for reading individual results as well as statistic data of five samples.

## Measuring process

Test specimens are constructed from the base upwards. They consist of stainless steel sample base, strip of double sided tape, the sample of paper or board, strip of double sided tape, aluminium angle. Five samples are prepared simultaneously, pressed by individual pneumatic cylinders in the sample press, to ensure consistent adhesive sample preparation. The sample base is pneumatically clamped to the stage and the sample ruptured by the impact of the pendulum with the aluminium angle. The energy required to rupture the specimen is shown on the digital display.



## Features

- Statistical analysis of 5 samples
- Automatic monitoring in compliance with DIN-standard
- Automatic zero setting and automatic range detection and self-calibration
- User defined denomination:  $J/m^2$ ,  $mJ/in^2$  or  $ft\ lb/in^2$
- Pneumatic sample clamp (identical pressing force through five individual cylinders)
- Clamping time and clamping force adjustable by menu
- Electronically controlled sample pressing time and pressing force
- Magnetic pendulum release
- Remote control using RS-232 as well as transfer measuring values to PC or printer
- Convenient standard report inclusive database
- Measuring range adaptable to customer needs

## Physical specifications

### Dimensions

50 x 47 x 52 cm (WxDxH)

### Net Weight

30 kg

## Standards

### TAPPI T-833

## Performance data

### Sample size

5 pieces of 25.4 x 25.4 mm

### Pressing force

0 to 900 N at steps of 10 N

### Pressing time

1 to 99 sec at steps of 1 sec

### Range

	Low	Std	High
J/m <sup>2</sup>	525	1050	2100
ft lb/in <sup>2</sup> 0.25	0.50	1.00	
mJ/in <sup>2</sup>	339	678	1355

### Power supply

220-240 V, 1 ph, 50 Hz or

110-120 V, 1 ph, 60 Hz

### Air supply

6 bar, 90 psi, 600 kpa