

# CARTON FORCE ANALYSER



## SPECIFICATIONS

### INSTRUMENT SPECIFICATIONS

	Resolution	Repeatability
Rotation Angle(°)	0.01	<0.1
Rotation Speed(°/s)	0.001	<0.01
Sample Length(mm)	0.01	<0.05
Load Cell (mN)	1	<10

### INSTRUMENT DIMENSIONS

Size	220 x 225 x 300 (mm)
Net weight	7kg (Instrument), 4kg (PC)
Gross weight	15 Kg

### TOUCH SCREEN PC SPECIFICATIONS

Connectivity- Wireless 802.11n, Wireless 802.11b, Wireless 802.11g/ LAN Network

Operating System- Windows 7

Easily integrated into laboratory network for results/backup and printing

Results can also be exported to USB data key.

## OPTIONAL EXTRAS

### Round Crease Testing Jaw

Used to test rounded corner packaging.

### Hanatek Laser Sample Cutter

Fast accurate cutting of multiple samples & test types.

## APPLICATIONS & STANDARDS

**ISO 2493:1992** Paper and board – Determination of resistance to bending (Lorentzen & Wettre/Taber)

**ISO 5628:1990** Paper and board – Determination of bending stiffness by static methods

**Tappi T 556 om-05** Bending Resistance of Paper and Paperboard (Lorentzen & Wettre/Taber Tester)

**T 543 om-00** Bending Resistance of Paper (Gurley-Type Tester) – *Calculated results equivalent to this method.*

**T 489 om-04** Bending Resistance (Stiffness) of Paper and Paperboard (Taber-Type Stiffness Tester in Basic Configuration)

**SCAN-P-29-95** Bending Resistance

**DIN 53121** Testing of paper and board - determination of the bending stiffness by the beam method

**BS 6965-1:1988** Creasing properties of carton board. Method for determination of crease recovery (spring back) of 90° fold.



Certificate no: FM 29741  
ISO: 9001 – 2008

LOCAL AGENT

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INCREASE THE  
RUNNING SPEED OF  
CARTON PACKAGING

# CARTON FORCE ANALYSER

MEASURING ALL THE  
FORCES REQUIRED TO  
ERECT AND FILL CARTONS

Optimise packaging design  
and manufacture

Increase running speeds

Eliminate rejections and  
reduce waste



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 **RHOPOINT**  
INSTRUMENTS

# CARTON FORCE ANALYSER

## INCREASE THE RUNNING SPEED OF CARTON PACKAGING

The Hanatek CFA measures the forces that limit the running speed of folding box board packaging.

By measuring the stiffness of the substrate and crease bending resistance the user can optimise cartons for faster running and packaging speeds.

The instrument allows individual creases to be analysed identifying problem areas in packaging design or manufacture.

Industry research indicates that the packaging speeds of pre-glued skillets is governed by the energy required to open creases. The Hanatek CFA is the first instrument to isolate and accurately measure this key parameter.

### TOUCH SCREEN INTERFACE

The CFA uses an intuitive touch screen interface making it accessible and easy to use.

### DEVELOPMENT TOOL OR Q. A. INSTRUMENT

This flexible instrument can be configured for Quality or Research use -

#### Research Tool

- Create and save bespoke test methods
- Variable sample length, rotation speed and crease angle
- Statistical and Graphical Analysis of results.

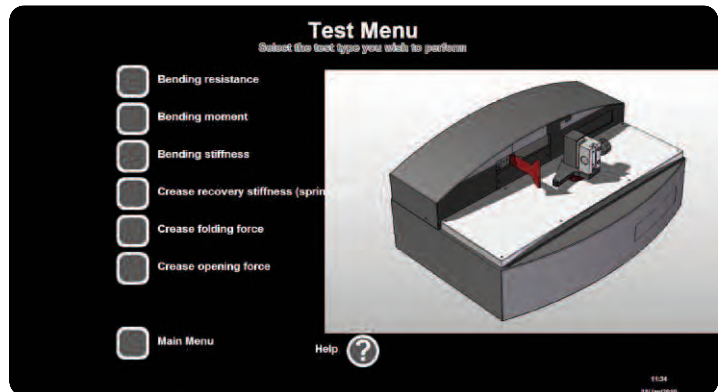
#### Q.A. Instrument

- Preloaded ISO/BS/TAPPI Test Methods
- Date/Operator Stamped Results
- Pre-set Pass/Fail Criteria
- Optional Password Protection

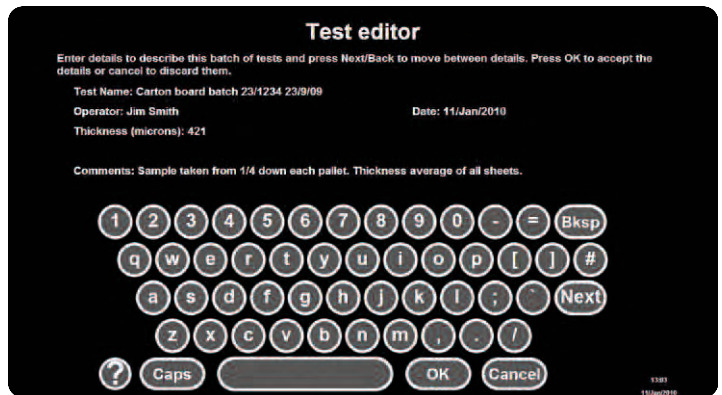
### ON SCREEN GRAPHICAL HELP

All operations and test methods have comprehensive graphical on-screen help.

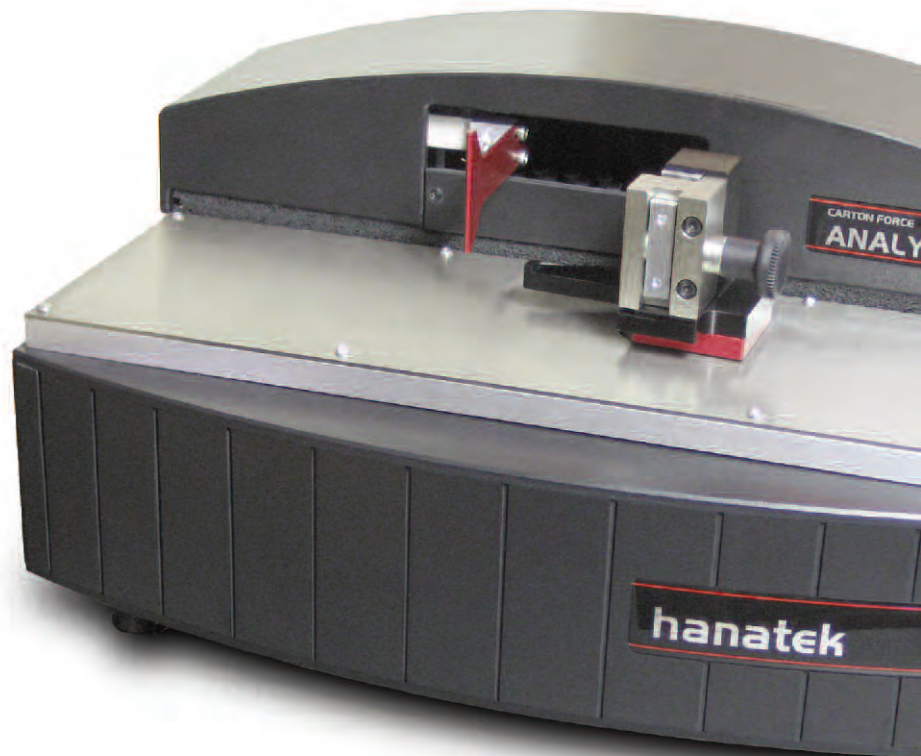
- Intuitive and easy to use
- Easy training for new users
- Consistent results for all operators
- No need to consult complicated manuals



The instrument has pre-loaded test instructions that ensure samples are tested to international standards.



Test results can be saved and compared.



# VERSATILE INSTRUMENT – REPEATABLE MEASUREMENT – EASY TO USE

## BENDING RESISTANCE/MOMENT/STIFFNESS

The instrument has pre-loaded routines that allow bending resistance testing of multiple samples to all industry standard tests (Taber, PIRA, Lorentzen & Wettre and Gurley).

The instrument also can also report the absolute bending stiffness and modulus of elasticity for carton substrates.

## CREASE RESISTANCE

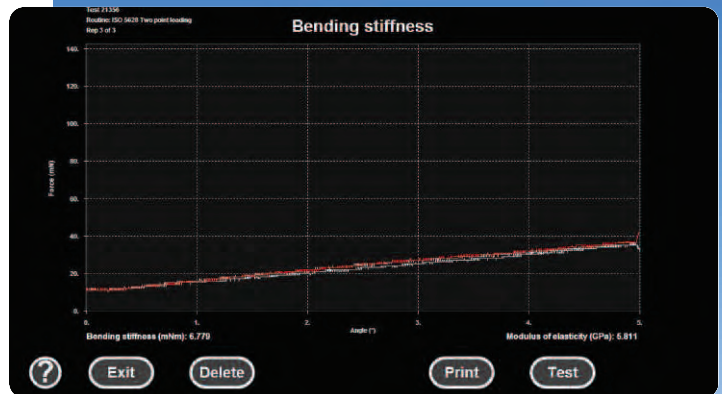
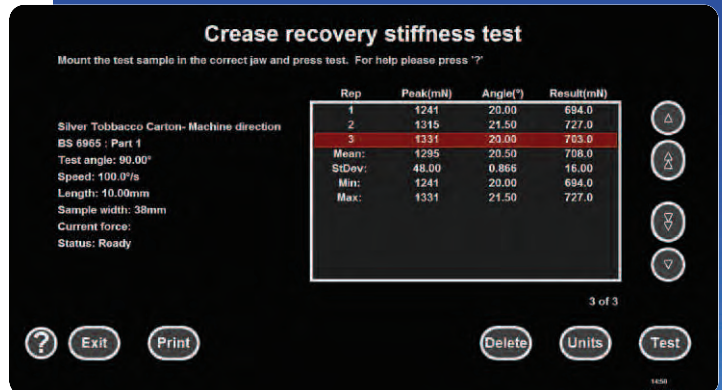
Pre-loaded routines allow multiple samples to be tested quickly with industry standard tests (BS & PIRA).

Flexible R & D testing options allow creases to be tested at non standard speeds (up to 360°/s) and crease angles (up to 155°). Sample length is also variable.

Real time graphs detail the process of folding, showing increased crease resistance until board fibres break and the crease relaxes. The CFA allows these fingerprints to be saved and overlaid, a powerful tool that allows detailed comparison of different crease formats, substrates and manufactured batches



Crease resistance, crease opening and substrate stiffness. Round-corner crease resistance jaw is also available.



## CREASE OPENING FORCE

The force required to erect pre-glued skillets can determine the packaging speeds of automatic filling lines. Slow running skillets are often rejected leading to increased waste.

The Hanatek CFA measures the force and energy required to erect each individual folded crease. This information can be used to optimise carton design and predict the running speed of samples before committing machine time.