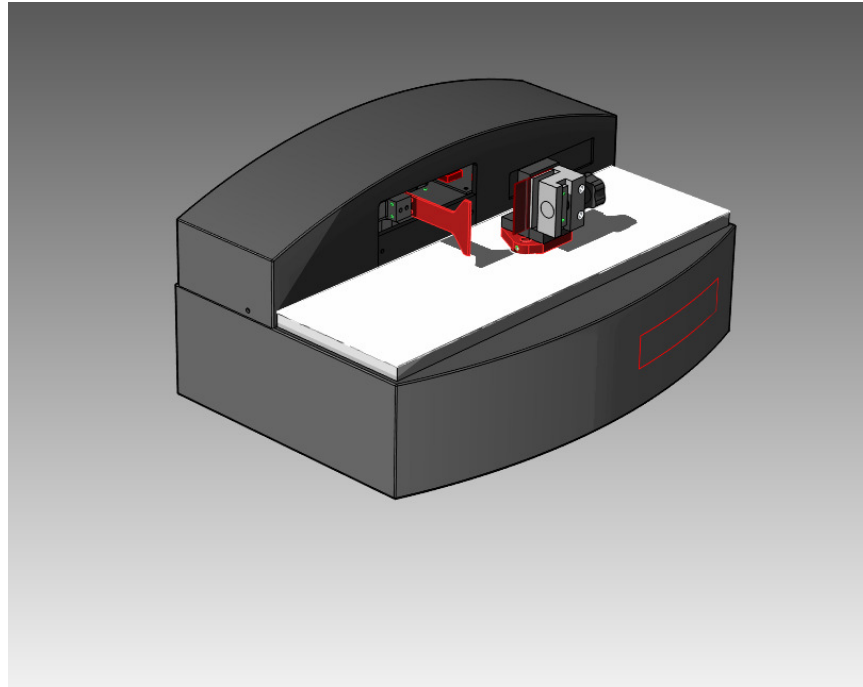


hanatek

CARTON FORCE ANALYSER



MODEL CFA OPERATING MANUAL

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Cartons Force Analyser

Printed cartons are used to protect and promote many products including food, pharmaceuticals, tobacco and other consumer goods.

Once printed, cut and creased the cartons are either supplied as blanks (unglued), or skillets (partially glued and pre-folded). These are then run on automatic filling lines where the carton is erected and glued, the product filled and the finished carton is sealed and packed.

As a significant proportion of final product costs can be governed by the time taken for this process to be completed, it is essential that cartons are manufactured to feed, erect, run, seal and pack at the fastest possible machine speeds.

It has been proven that the amount of force used to fold pre-formed creases, the stiffness of the substrate and the ease of opening skillets are all crucial factors determining the maximum speed at which the cartons can be processed.

Analysing carton forces with the Hanatek Carton Force Analyser ensures that problem areas in folding boxboard packaging can be easily identified leading to direct cost savings. Cartons can be run at maximum machine speeds whilst waste minimalised due reduced numbers of misfeeds and less rejected material.

The Hanatek CFA achieves this by measuring more accurately than previous generations of packaging test instruments. Its innovative touch screen interface with graphical help screens ensures operator training is kept to a minimum and operator introduced errors are eliminated.

Recent academic research has indicated that slow production speeds for skillet cartons can be directly associated with forces required to erect the carton. The Hanatek Carton Force Analyser is the first instrument where the opening forces can be isolated and accurately measured for all individual creases.

PACKING LIST

CFA Carton Force Analyser

1 x Bending Test Jaw

1 x Crease Test Jaw

1 x Additional Jaw from below

 Full Carton Opening Test Jaw

 Crease Opening Test Jaw

 Phillip Morris Rounded Crease Jaw

1 x Calibrated Test Shim

Mouse and Keyboard

Computer Power Supply

Hanatek USB Data Pen

1x CFA Mains Cable

1 x Hanatek Crease and Stiffness Sample Cutter

Foot Adjustment Spanner

Bulls Eye Spirit Level

OPTIONAL EXTRAS

Phillip Morris Rounded Crease Jaw

Additional test Jaws

WARNING – THE HANATEK CFA HAS MOVING PARTS WHICH MAY CONSTITUTE A PINCHING RISK FOR FINGERS.

REASONABLE CARE MUST BE TAKEN AT ALL TIMES – DO NOT TOUCH THE MOVING PARTS DURING OPERATION AND ENSURE HAIR AND CLOTHING IS KEPT CLEAR.

ASSEMBLY

1.0 Unpack the unit carefully and check the contents against the packing list.

2.0 Place the instrument on a suitable bench.

Avoid using the instrument in areas where vibration may affect the readings; i.e. close to heavy machinery.

3.0 Ensure the instrument is level before use.

Place a spirit level central on the measurement platen and adjust the feet until the spirit level bubble remains central. This is important and must be periodically checked and adjusted every time the equipment is moved.

4.0 Plug the instrument and touch screen into a suitable main supply using the supplied mains leads.

5.0 Plug the data cable (USB type B) into the back of the CFA instrument.

6.0 Plug the other end of the cable into a USB port on back of the touch screen unit.

For normal operation and testing there is no need to plug in supplied mouse and keyboard.

POWER UP

BEWARE – THE HANATEK CFA IS FITTED WITH A 20N LOAD CELL. ANY FORCE ABOVE 2KG APPLIED TO THE LOAD CELL MAY RESULT IN CATASTROPHIC DAMAGE.

CARE MUST BE TAKEN TO AVOID CRASHING THE LOAD CELL INTO OBSTRUCTIONS LEFT ON THE PLATEN DURING MEASUREMENT OR WHEN RETURNING TO HOME POSITION.

HIGHER FORCE LOAD CELLS ARE AVAILABLE UPON REQUEST-CONTACT HANATEK FOR MORE DETAILS

- 1.0 Press the power up button on the touch screen.

The instrument and touch screen will power up.

Using the CFA Touch Screen Interface

The CFA is controlled using a touch screen PC that has the CFA software pre-installed. To launch the software double press the CFA Icon on the desktop.

To enter a menu, begin a test etc. simply press the on screen buttons.

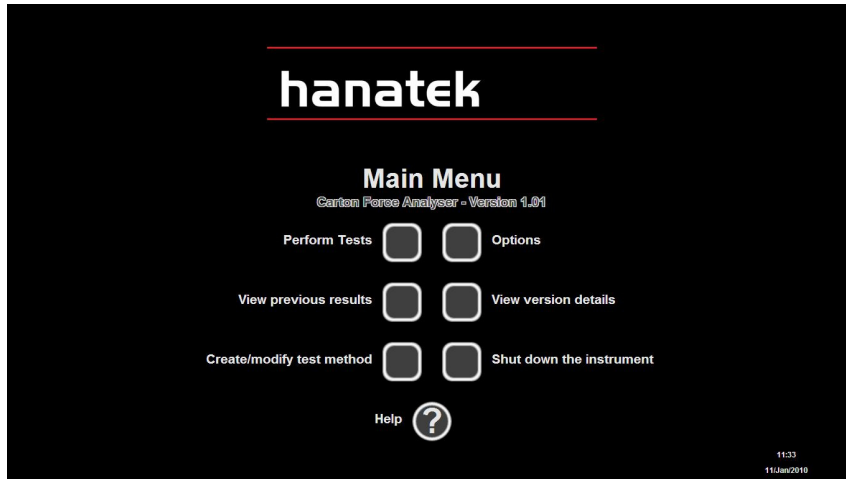
In normal operation the instrument can be operated without the mouse and keyboard, these are provided to help change the configuration of the touch screen PC.

SET UP/ADD PRINTER

The Hanatek AFT software will automatically print to the default windows printer. This is set to a PDF creator during manufacture. See windows help for more details in adding local or network printers.

START SOFTWARE

- 1.0 Double tap on the CFA ICON on the main screen and the software will start, the instrument is now ready for use.



PASSWORD PROTECTION

If you want to run password protection on the instrument (this stops the operator altering and deleting test methods and results), a password should be set up now.

- 1.0 Go to MAIN MENU>OPTIONS>PASSWORD PROTECTION
Press the help button for graphical instructions.
- 2.0 The instrument will prompt for a password- the factory default password is “Hanatek” (note: capital H).
- 3.0 Type this password in using the on-screen keyboard. The instrument will now allow the user to change and activate password protection.

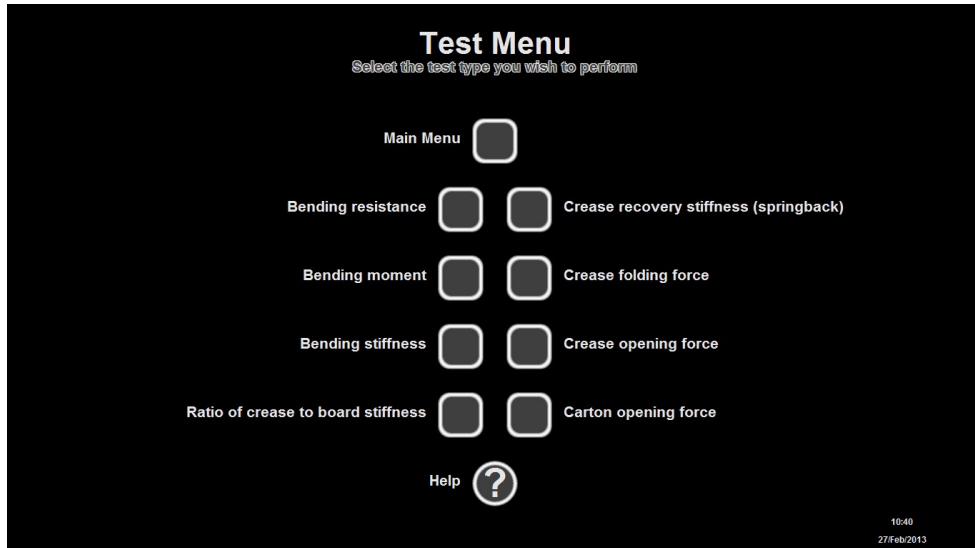
Before running a test it is advisable to become familiar with the test methods and equipment used.

CALIBRATION CHECK

If required it is possible to check the instrument calibration.

- 1.0 To check the absolute values obtained by the instrument a quadrant balance and weights should be used to apply forces directly to the loadcell.
Go to MAIN MENU>OPTIONS>CALIBRATION CHECK
Press the help button for full graphical instruction.
- 2.0 Alternatively the instrument operation can be verified using the calibrated test shim.

Go to MAIN MENU>PERFORM A TEST>BENDING RESISTANCE

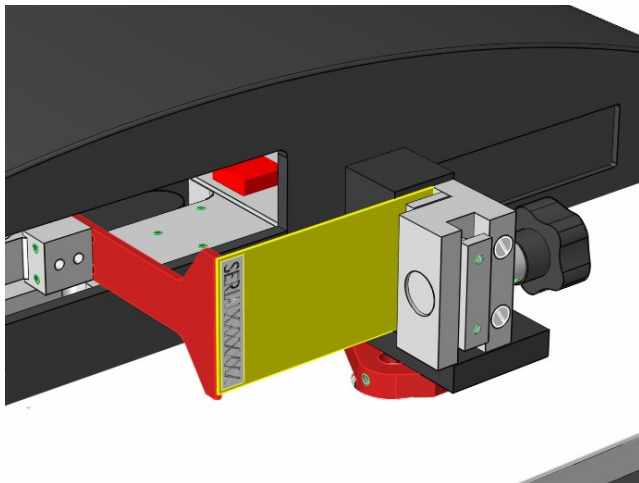


The test selection menu

Run the test CALIBRATION CHECK.

The results should be within the tolerances printed. If the results are outside these tolerances the instrument requires recalibration. Contact Hanatek instruments for your Local service centre.

Below is an illustration of how the test shim should be inserted into the instrument Jaw.



CALIBRATION

The instrument has a four point calibration that is used to linearise the loadcell.

The loadcell should be calibrated on an annual basis.

Go to MAIN MENU>OPTIONS>CALIBRATION

WARNING- CALIBRATION SHOULD ONLY BE ATTEMPTED BY AUTHORISED CALIBRATION PERSONNEL. FAILURE TO ADHERE TO A PRESET CALIBRATION ROUTINE WILL RESULT IN ERRONEOUS READINGS AND POSSIBLE DAMAGE TO THE INSTRUMENT. CONTACT HANATEK FOR MORE DETAILS.

VIEW TEST INSTRUCTIONS

- 1.0 Go to MAIN MENU>OPTIONS>TEST INSTRUCTIONS
Press the help button for graphical instructions.

CREATING AND EDITING TEST METHODS

Carton Force Analyser test methods contain information about test set up only- dwell times, speed, distance etc.

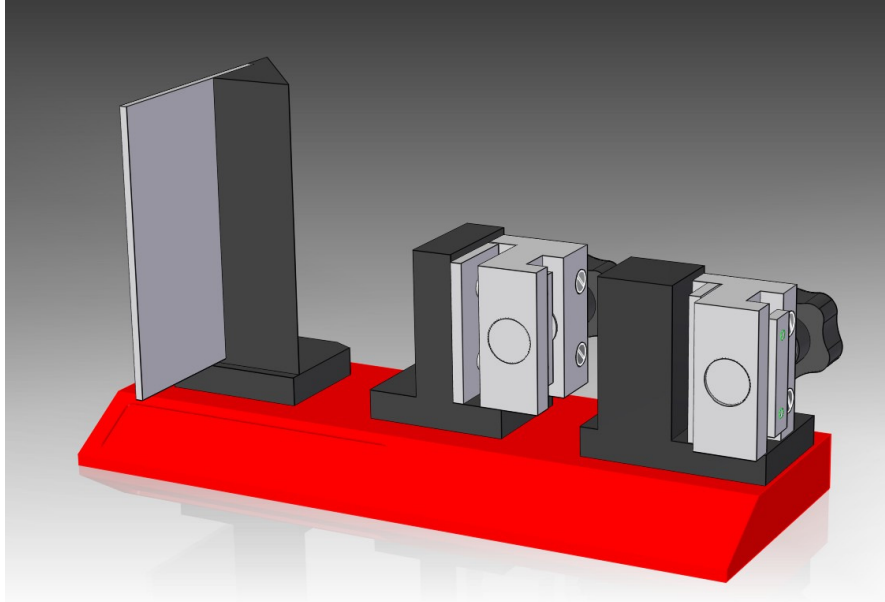
For full details on running tests within the listed standard it is always advisable to purchase a copy of the standard. The full standards contain details about sample preparation, conditioning and testing that it is not possible to list within the CFA software.

Testing standards are updated and reviewed constantly; it is the user's responsibility to ensure test methods are up to date, accurate and relevant to their industry.

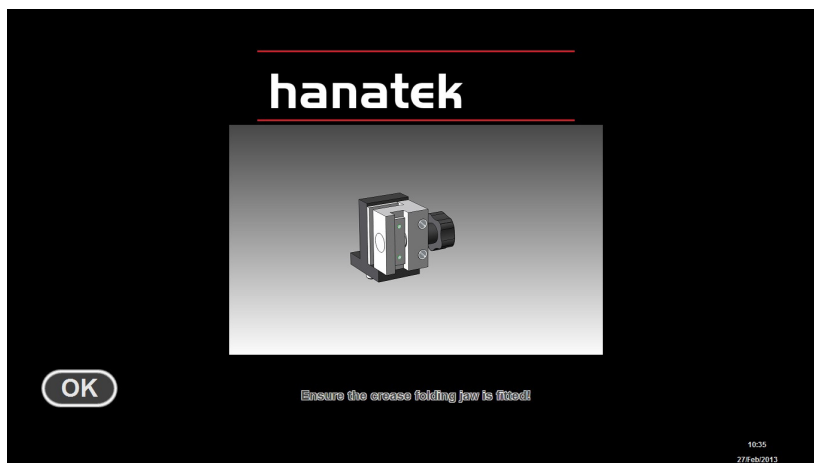
- 1.0 Go to MAIN MENU>CREATE/MODIFY TEST METHOD
Press the help button for graphical instructions.
- 2.0 Select the relevant test method and create/modify as required.

SELECTING AND FITTING TEST JAWS

The Hanatek Carton Force Analyser is supplied with three magnetically fixed sample jaws which are precisely engineered to comply with relevant test standards. Additional jaws are available.



The instrument displays a picture on screen of the jaw required for each test. To change a jaw, grip firmly and lift off.



The replacement jaw should be taken from the rack; it is easily located into position on the instrument using the two guide dowels. The magnets will firmly hold the jaw in place.

RUNNING A TEST

- 1.0 Go to MAIN MENU>PERFORM TEST
Press the help button for graphical instructions.

EXPORTING/PRINTING RESULTS

- 2.0 Go to MAIN MENU>VIEW PREVIOUS TEST RESULTS
Press the help button for graphical instructions.

Press the DETAILS button.

To EXPORT results plug a suitable USB data pen into any free USB port. Press the EXPORT button. The results will be as a .txt file that can be imported into any commercial spread sheet software.

NOTE, the exported file will be created on the removable drive with the highest drive letter.

To PRINT results ensure a windows printer is attached and correctly setup. Press the PRINT button.

SERVICE

Contact- HANATEK Instruments:

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EU Directive 2002/96/EC on WEEE (Waste Electrical & Electronic Equipment) and RoHS (Restriction of the use of certain Hazardous Substances).

The European Union's Directive on Restriction of the use of certain Hazardous Substances in electrical and electronic equipment (ROHS) defines each of 10 categories of electrical and electronic equipment in Annex I . Category 9 is defined as follows:

9. Monitoring and control instruments
 - Smoke detector
 - Heating regulators
 - Thermostats
 - Measuring, weighing, or adjusting appliances for household or as laboratory equipment
 - Other monitoring and control instruments used in industrial installations (e.g. in control panels).

The RoHS Directive defines the scope of restrictions in Article 2 as follows:

"1. Without prejudice to Article 6, this Directive shall apply to electrical and electronic equipment falling under the categories 1, 2, 3, 4, 5, 6, 7 and 10 set out in Annex IA to Directive No 2002/96/EC (WEEE) and to electric light bulbs, and luminaires in households."

This product is supplied as a Monitoring and Control instrument and as such falls within category 9 of the EU directive 2002/96/EC and so is excluded from restrictions under the scope of the RoHS Directive.

The Waste Electrical and Electronic Equipment Directive is intended to reduce the amount of harmful substances that are added to the environment by the inappropriate disposal of these products through municipal waste.

Some of the materials contained in electrical and electronic products can damage the environment and are potentially hazardous to human health; for this reason the products are marked with the crossed out wheelie bin symbol which indicates that they must not be disposed of via unsorted municipal waste.

Rhopoint Instruments Ltd have arranged a means for our customers to have products that have reached the end of their useful life safely recycled. We encourage all end users to us at the end of the product's life to return their purchase to us for recycling as per Article 9 of the WEEE Directive.

Please contact us on +44 (0) 1424-739622 and we will advise on the process for returning these waste products so we can all contribute to the safe recycling of these materials.