



## ModularLine

Automated testing lines in modular design

## StandAlone

1

Individual testing instruments

## PulpTester

6

Testing instruments for pulp

## Preparation-Products

Instruments for test preparation

**OUR PRODUCTS** 

## PERFECT SAMPLE PREPARATION FOR RELIABLE MEASUREMENT RESULTS



# PERFECTLY PREPARED WITH **PreparationProducts**

FRANK-PTI understands itself as full-range supplier. Therefore it is only consequent when we also make you a comprehensive and high-quality offer for test preparations. The better the test preparation, the more reliable are the measurements. This is why we have an assortment of products that harmonise with all instruments and cover all areas of applications. Our assortment includes these very successful products:

- CONCORA for corrugated samples
- ECT SAMPLE SAW for the cardboard sector. This is a special FRANK-PTI product and with its special saw blade one of the best saws on the market.

## SPECIAL PRODUCTS DEVELOPED BY FRANK-PTI

Our extensive assortment includes high-quality trade goods as well as special products made by FRANK-PTI. In any case, all PreparationProducts comply with our typical standards: easy and user-friendly operation, longevity and accuracy. What is more: we frequently offer you an alternative between budget-priced manually-operated and efficient pneumatic products. These are two of our bestsellers in this area:

- Punches in a great variety of types and sizes
- ECT SAW

## FOR STANDARDS-COMPLIANT MEASUREMENTS OF



PRECISION THROUGH TOP-QUALITY MATERIAL AND RUGGED DESIGN

6

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Sturdy punch for sizes like DIN A4.



## MOST IMPORTANT BENEFITS

- $\checkmark$  Easy to use due to the food pedal
- $\checkmark$  Bell crank for uniform force distribution
- $\checkmark$  Several samples can be cut the same time
- $\checkmark$  Savety device to prevent injury

### PRODUCT DESCRIPTION

The pneumatic sample punch is a robust floor-mounted unit that works according to the "punch & die" principle. A foot pedal is integrated with the device for ease of operation, and this initiates the pneumatic punch process. So that the material to be punched doesn't slip, a clamping mechanism holds it firmly before the punching process. An integrated deflection lever ensures an even distribution of force. Samples are easily removed from the sample retrieval area located below the punch tool. The integrated safety switch prevents inadvertent activation of the punch while the safety guard is open, to prevent injury.

## TEST DESCRIPTION

The sheet of material to be punched is pushed into the sample slot of the pneumatic surface punch, which for safety has a maximum height of 8 mm. Touching and holding the foot pedal holds the sheet securely. Then the stamp moves down through the die and punches the sample. It falls, under its own weight and due to the ejector attached to the stamp, into the sample retrieval area. When the foot is removed from the pedal, the stamp returns to the start position and the punched sample as well as the offcut can be removed.



Samples are easily removed from the sample retrieval area

### TECHNICAL DATA

#### DEVICE/INSTRUMENT

- "Punch & dye" principle
- Easy to use due to the foot pedal
- Pneumatic operated
- Pneumatic binder for precise cutting of the sample
- Easy accessible sample-taking
- Savety device to prevent injury
- Bell crank for uniform force distribution
- Available punch sizes: 297 x 210 mm, 200 x 250 mm, 200 x 300 mm

#### INSTALLATION REQUIREMENTS

Electrical connection	No
Water connection	No
Compressed air	6 bar

#### APPLICABLE STANDARDS

No standards available



Pneumatic operated device



Foot switch for easy handling of the device



# MANUAL CIRCULAR CUTTER

A quarter rotation of the crank moves four special blades to cut a round sample. Secure grips ensure exceptional levels of safety. The manual circular cutter is supplied with a cutting mat.

## MODELS

- Cutting size 100 cm<sup>2</sup>
- Cutting size 50 cm<sup>2</sup>
- Cutting size 10 cm<sup>2</sup>
- Other sizes on demand



# ROUND SAMPLE PUNCH MANUAL

The robust round sample punch is mounted on a heavy, bonded plywood base. The round blade is forced through the die with a hand lever and the sample is expelled downwards. An acrylic glass safety guard surrounds the upper blade.

## MODELS

- Punching size 100 cm<sup>2</sup> for tissue
- Punching size 100 cm<sup>2</sup> for paper and board
- Punching size 40 cm<sup>2</sup> for color backing with a special colleting tray for punching color samples for the opacity measurement of the automated color- and brightness tester without touching them



Article No. S95937



# STRIP CUTTER VARIABLE SIDE GUIDE

The universal sample strip cutter is suited to cutting different widths of sample strip due to its variable side guide. The integrated clamping mechanism ensures that the sample does not slip during cutting. A safety guard is attached in front of the blade.

## MODELS

- Cutting length 385 mm
- Cutting length 430 mm
- Cutting length 580 mm
- Cutting length 710 mm



# STRIP CUTTER FIXED SIDE GUIDE

With its fixed side guide, the universal sample strip cutter is used to cut sample strips of up to 15 mm. The integrated clamping mechanism ensures that the sample does not slip during cutting. A safety guard is attached in front of the blade.

## MODELS

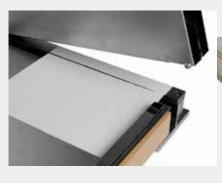
- Cutting length 350 mm
- Cutting length 460 mm

## Article No. S95815



# DOUBLE BLADE CUTTER

The double blade cutter allows sample strips of a width of up to 50 mm to be cut. A safety guard prevents injury, and also holds the paper securely to prevent it from slipping during cutting.



### MODELS

- Cutting width 12.7 mm
- Cutting width 15.0 mm
- Cutting width 25.0 mm
- Cutting width 50.0 mm (for tissue)

Article No. S95904



# DOUBLE BLADE CUTTER FRANK

The double blade cutter allows sample strips of a width of 12.7 or 15.0 mm to be cut. The V-shaped cut guarantees a parallel cut. A safety guard prevents injury, and also holds the paper securely to prevent it from slipping during cutting.



- Cutting width 12.7 mm
- Cutting width 15.0 mm



## PRODUCT DESCRIPTION

The robust strip punch functions according to the "punch & die" principle and consists of an upper and lower blade, which punch the sample. A long hand lever with force transfer, makes punching easier. On the left of the device is a feeding table with integrated guide, which guarantees ease of material placement. A clamping mechanism holds the sample firmly during punching. Samples are removed from a metal sheet located below the punch.

The punch can be used for materials from 50 up to 800 gsm.

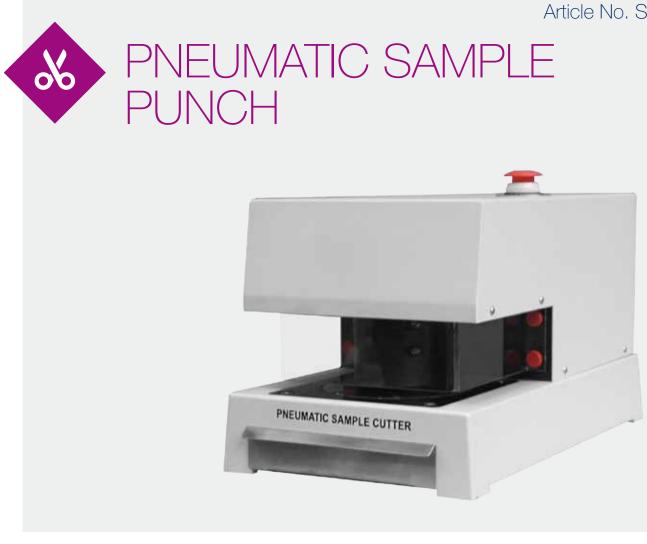
## TEST DESCRIPTION

The material to be punched is placed on the feeder table, and pushed along the guide rails between the upper and lower blades. Pushing the hand lever down places a safety guard on the material, which also prevents the material from slipping. The punching takes place when the lever is pushed down. After the process the sample strips fall through the lower blade onto a metal sheet, which is pulled out to remove the samples.

- Punching size 6.0 x 0.5 in For CCT-, RCT- and CMT-tests
- Punching size 7.0 x 1.0 in For internal bond tests
- Punching size 300 x 15 mm
  For tensile tests acc. to ISO and SCT-tests
- Punching size 300 x 25 mm For tensile tests acc. to TAPPI
- Punching size 300 x 25.4 mm For tensile tests acc. to TAPPI



Metal sheet for easy removing of the samples



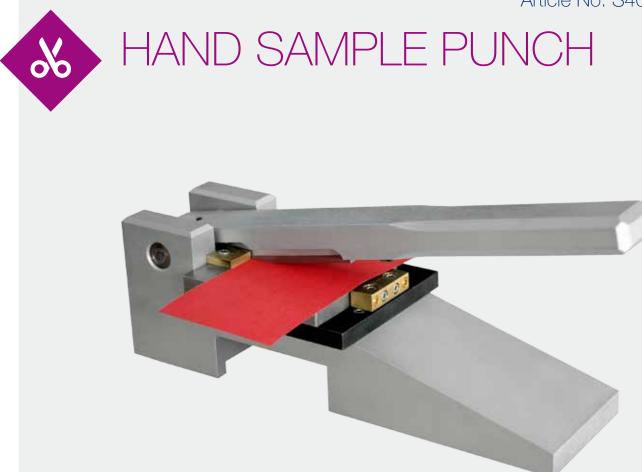
## **PRODUCT DESCRIPTION**

The punch for preparing samples for Elmendorf, twin folding or bending tests is a robust table device that operates according to the "punch & die" principle. The punching is pneumatic and happens at the touch of a button. To prevent injury a safety guard is attached around the punching unit. Below the punching tool there is a sample drawer, from which the samples can be removed.

## TEST DESCRIPTION

The sheets of material to be punched are pushed into the sample slot of the punch, which is a maximum of 4 mm high for safety. At the simple touch of a button, the punch moves down through the die and punches the sample. This falls into the sample drawer below the punching tool and can then be removed.

- Elmendorf samples acc. to TAPPI 62 x 50 mm
- Elmendorf samples acc. to ISO 63 x 50 mm
- Samples for bending tests 38 x 80 mm
- Samples for twin folding tests 15 x 110 mm
- 100 x 100 mm



## PRODUCT DESCRIPTION

The hand punch allows fast preparation of samples for Elmendorf or bending tests. It consists of a triangular upper and lower blade. The punch is operated via a hand lever.

## TEST DESCRIPTION

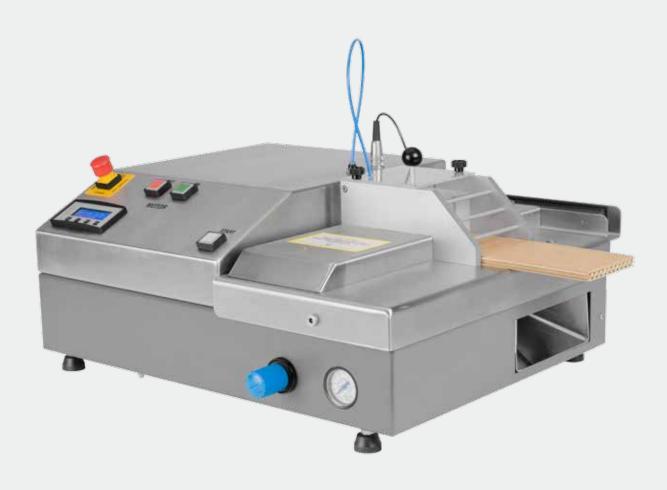
The material to be punched is placed against the rest on the lower blade. When the hand lever is pushed down, the sample is evenly cut and falls through the die below the punch, where it can then be removed from the side.

- Elmendorf samples acc. to TAPPI
  62 x 50 mm
- Elmendorf samples acc. to ISO
  63 x 50 mm
- Samples for bending tests 38 x 70 mm



The material to be punched is placed on the lower blade





## MOST IMPORTANT BENEFITS

- $\checkmark$  Accurate and plane parallel cutting due to the circular saw blades
- ✓ Highspeed-motor with up to 12.000 rpm adjustable
- $\checkmark$  Automatic cleaning and dust avoidance
- ✓ Pneumatic cutting slide
- $\checkmark$  Automatic sample ejection

## PRODUCT DESCRIPTION

The ECT sample saw is different to the regular system "Billerud" because it cuts using circular saw blades, rather than a parallel blade movement. This allows a precise cut. The compact and robust stainless steel case contains all the components necessary for the process, which consist of sample slide with sample feed, and integrated circular saws below, the control unit with integrated motor and controls. The sample slide travels backward and forward pneumatically, and the cut samples are ejected by compressed air. To prevent dust there is a suction cleaner connection on the back of the unit, to which the included suction cleaner is attached.

### TEST DESCRIPTION

Corrugated board, cut to 100 mm in width, is inserted into the sample feed, and automatically held in place by the binder. Motor and suction cleaner are started by simply touching a button. Then the start button is pressed, to start the cutting process. The sample slide travels slowly backwards over the circular saw blades and the sample is parallel cut to exactly 25 mm. This is then ejected via compressed air and the sample slide returns to the start position. The corrugated board can then be fed further in and more samples can be cut. On completion of the cutting operation, motor and suction cleaner are switched off simply by touching a button.

### TECHNICAL DATA

#### DEVICE/INSTRUMENT

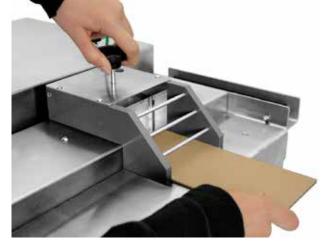
- Sample cutting up to a thickness of 20 mm
- Accurate and plane parallel cutting due to the circular saw blades
- Highspeed-motor: up zu 12.000 rpm adjustable
- Automatic cutting and sample ejection
- Automatic cleaning and dust avoidance due to the suction cleaner
- Cut counter
- Optional: Suction cleaner Substitute blades

#### INSTALLATION REQUIREMENTS

Electrical connection	200 – 240 V / 50 – 60 Hz / B 10 A
Water connection	No
Compressed air	4 – 6 bar

#### APPLICABLE STANDARDS

- DIN EN ISO 3037\_2013
- ISO 13821\_2002
- TAPPI T811, T823, T838, T839
- FEFCO No. 8



Samples automatically held in place by the binder



The ECT sample saw cuts samples up to 20 mm thickness







Easy changeable blade

## PRODUCT DESCRIPTION

The round sample cutter has been specially developed for FCT tests in the crush tester and is used for creating samples with a surface area of exactly 100 cm<sup>2</sup>. It consists of a threaded handle, a mechanism to preset the cut depth, and the blade, which can be easily exchanged. To prevent the blade slipping on the corrugated board, there are four pointed nails on the underside. The material to be cut is placed on the included cutting pad, and the circular sample cutter is placed on top. Turning the handle produces a slow and precise cut through the corrugated board, to ensure that the cut edges remain undamaged. The sample created with the circular sample cutter can also be used to determine the grammage.

### TECHNICAL DATA

#### DEVICE/INSTRUMENT

- Crank thread
- Screw for presetting the cutting depth
- Four needels avoid slipping off
- Easy changeable blade
- Included into delivery: Cutting pad

## FLAT CRUSH TEST (FCT)

To determine the flat crush resistance.

The exactly 100 cm<sup>2</sup> sample prepared with the circular sample cutter is placed between the platens in the flat crush tester.

In the FCT test, the surface of the corrugated paper is pressed until the flutes buckle. The force measured indicates up to which point the fibres recover or when they can no longer return to their original shape (meander point) and how much force is required to finally break them.



Flat Crush Test (FCT)



# CONCORA MEDIUM FLUTER

For the preparation of corrugated samples for CMT- and CCT-Tests.



## MODELS

- Concora Medium Fluter wavetype A
- Concora Medium Fluter with changeable segments



Optional: second sample slot for GOST-standard (15 mm width)

## MOST IMPORTANT BENEFITS

- $\checkmark$  Digital display of the temperature
- $\checkmark$  Fast heating of the fluting segments (approx. 15 min)
- ✓ Energy optimized: only 450 W power consumption
- $\checkmark$  Low heat emissions, operation in climated laboratories possible

## PRODUCT DESCRIPTION

The Concora medium fluter consists of a main case and a fluter case. The motor and controls are installed in the main case. Behind the safety cover of the fluter are the geared elements and heating elements. On its top there is a slot for insertion of samples. The thermostat, mounted in the main case, regulates and displays the fluter segment's temperature. The standard unit is delivered with integrated geared segments for A flute. For other flute types, the Concora medium fluter with exchangeable flute segments is available. The corresponding "third hand" and tamping block are used for adhesively attaching the previously created flute.

### TEST DESCRIPTION

A 152.4 x 12.7 mm test strip is created with the strip punch (see page 9) and fed into the sample slot that leads to the fluter which has been preheated to operating temperature. On pushing the start button geared segments pull the strip through the machine and press it with a defined force and preset temperature, creating flutes in the strip. After flute creation, it is delivered to a compartment for removal by the operator. It can now be used for a CCT test or prepared for the CMT test using the "third hand". In this process the flute is placed on the flute block and the third hand is closed. An adhesive tape acc. to standard is then applied to the flute, and the tamping block is used to firmly attach it. At this point the flute block is pushed sidewards and the tape is removed.



#### DEVICE/INSTRUMENT

- Digital display of the temperature
- Temperature up to 200° C adjustable
- Fast heating of the fluting segments
- Speed of the segments: 4.5 rpm
- Contact pressure: 100 N
- Segments type A
- "Third hand" and tamping block

#### INSTALLATION REQUIREMENTS

Electrical connection	100 – 230 VAC / 50 – 60 Hz
Water connection	No
Compressed air	No

#### APPLICABLE STANDARDS

- DIN EN ISO 7263\_2011
- TAPPI T809





Slot for easy insertion of samples

The flute is placed into the "Third hand" and clamped



An adhesive tape is applied to the flute



# INTERNAL BOND SAMPLE PREPARATION STATION

For preparing samples for the internal bond test



## MOST IMPORTANT BENEFITS

- $\checkmark$  Variable adjustment of contact pressure and pressing time
- Automatic start of the sample preparation process on closing the device
- No change of knives required, thus no time-consuming cleaning necessary
- Simpler operation
  thanks to touch screen display
- Easy locking of the test samples
  with the aid of stop bars

## PRODUCT DESCRIPTION

The Internal Bond Sample Preparation Station with its adjustable contact pressure and definable pressing time allows for a constantly identical preparation of all test samples for the internal bond test. Pressure and time are displayed on the easy-to-use touch screen display. A convenient locking mechanism prevents the test samples from slipping.

### TEST DESCRIPTION

At first the sample holders and angles are installed in the station in prescribed order. Then the material to be tested is inserted. When the station's lid is tilted forward all components are locked by means of compressed air and none of them can slip! The station compresses all five samples with identical pressure and time. The samples can now be cut manually and withdrawn individually.

## TECHNICAL DATA

#### DEVICE/INSTRUMENT

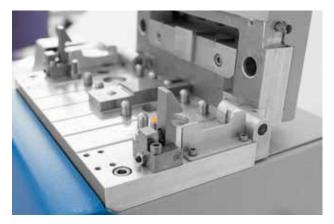
- Semi-automatic sample preparation with display of contact pressure
- Digital display with touch control
- Compatible with ProbeNet
- Display switchable between kPa and N
- Adjustable pressing time

#### INSTALLATION REQUIREMENTS

Electrical connection	100 – 240 VAC / 50 – 60 Hz / 2 – 1 A
Water connection	No
Compressed air	6 bar

#### APPLICABLE STANDARDS

- ISO 16260:2016
- TAPPI T569



Convenient locking mechanism



Open sample preparation station for placing the test samples

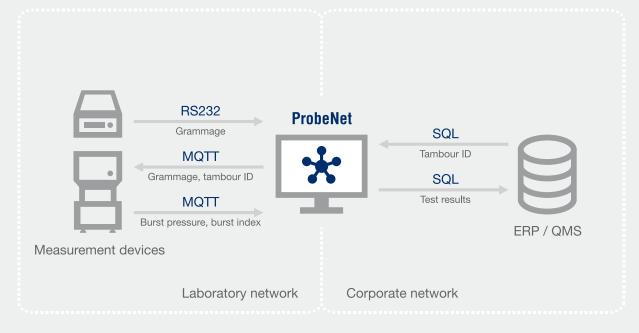


Rear panel of device with supply connections



# PROBENET

Software for collecting, saving and printing of test-results of various laboratory devices.



## MOST IMPORTANT BENEFITS

Simple operation thanks to a clear interface Measurement data from various devices shown in graphs and tables on a central computer

#### Customer-orientated setting options

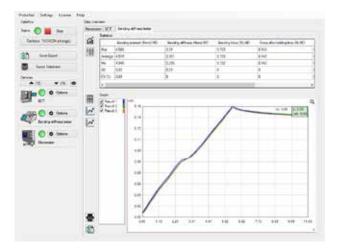
Description of measurement values adaptable according to customer wishes Conversion of measurement results to other units

#### Industry 4.0

Use of MQTT (Message Queue Telemetry Transport) via Ethernet for linking laboratory equipment.

 $\checkmark$ 

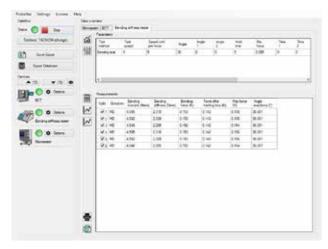
 $\checkmark$ 



PRODUCT DESCRIPTION

The ProbeNet application by FRANK-PTI is a software for the centralised collection of measurement data from different laboratory measurement equipment on one PC. ProbeNet is very easy to use and presents the measurement results on a well-arranged interface. Individual measurement results and statistics of all devices can be rapidly and clearly summarised in only one area. It is possible to mark results as outliers in the list of individual results and exclude them from the statistics and reports.

Statistics and graphics



ProbeNet facilitates a linking of various software systems for data exchange. All relevant data can be exchanged between the systems. Upon request, it is also possible to connect external devices through RS232, MQTT, Ethernet or file import.

Parameters and measurements

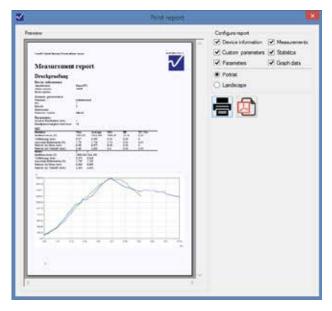


Backup traceability

A temporary local data backup guarantees the saving of the received data and offers traceability for up to 4 weeks. The data can comprise test parameters and measurement results but also tambour or batch numbers and climate data (data collection by means of an external climate measurement device, e.g. by FRANK-PTI).

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Settings file export

Data exchange is carried out via a local SQL database, which can also be used for data exchange with other data processing programmes within the company. Customers can define the data they want to export, e.g. measurement values and/or test parameters and/or statistics. It is also possible to define whether the data of all linked laboratory equipment or of individual devices should be exported. Furthermore, users can link data (e.g. climate data) to individual test series.

A hard copy of the report can be printed, to document the results, and contains an area for general information about device and measurement process, a listing of individual results, statistics, and a diagram showing the curves. This area can be removed from the report if desired, in order to save space. A company logo can also be added if required.

The results can be exported manually or automatically, both in a spreadsheet (e.g. Microsoft Excel), and a machine-readable format for further processing by other systems. The data can either be saved to the computer's hard disk or saved to a network drive.

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Configuration of user defined parameters



Connected devices Easy access to device options and customisation

### USER DEFINED PARAMETERS

To satisfy the demands of various different applications, user-defined parameters can be used to give ProbeNet several profiles. For every test series, the lab worker can optionally select a profile (e.g. customer log, internal log etc.) and data must be entered in the appropriate fields, where it is recorded both as a hard copy report and exported data. To speed data entry, there is an option to keep the latest input and reuse it for the next test series, and can be quickly selected if desired. Fields can also be set as optional or required.

### COMPATIBILITY

ProbeNet supports all devices with a data output manufactured and distributed by the PTA Group. If support is not yet available in the program, it can be added if needed. Devices are easily connected, via serial port, USB, or over the network. ProbeNet Mini supports parallel operation of more than one device.

## CUSTOMISATION

An individual adaption of descriptions and conversion of measurement values (e.g. from N to kN) is also possible. Furthermore, users can fade out unnecessary measurement values to keep the data overview compact.

## EASY SETUP

The initial setup process of ProbeNet takes less than 30 seconds. The application works out of the box and has no dependencies on third party software. In most cases the setup can be completed even without support from the local IT department.

## TECHNICAL DATA

#### SYSTEM REQUIREMENTS

Operating system	Windows XP Professional SP3 or newer
Software	Microsoft DotNet 4.0
Resolution	at least 1280 x 800 pixel
Internal memory	at least 1 GB
Hard drive space	20 MB for the software Local traceability needs additional drive space, depending on use.

# AT YOUR DISPOSAL – WORLDWIDE!

Owing to our integration into the globally acting Elof Hansson Company we are able to offer you a worldwide service network and service technicians who speak your language. They will always be on the spot when it comes to maintain, calibrate or repair your instruments.



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