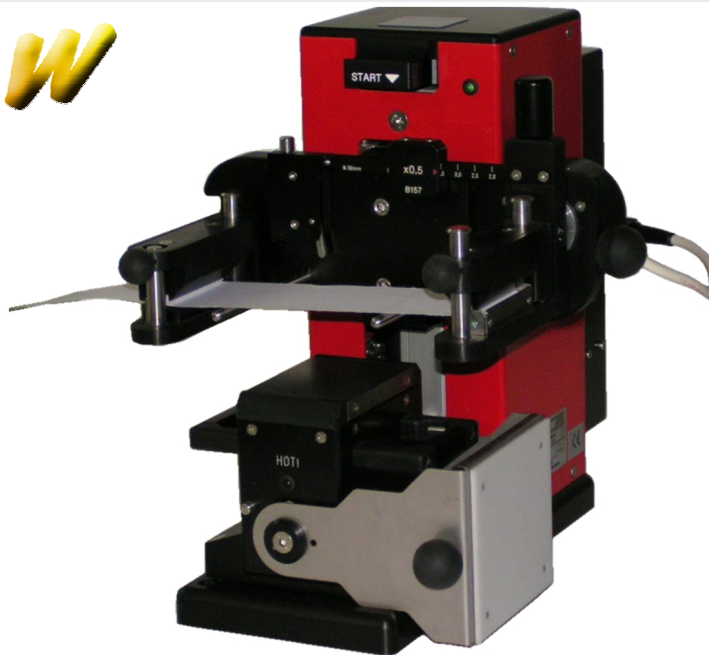


# HSA Heat Shrinkage Analyzer

Measuring Instrument for the Investigation of the Dimension Stability of Paper/Board/Plastic Foils under Thermal load

**New**



- Prediction of the converting properties of paper/board/foils concerning the dimension stability at thermal load up to 230°C

- Main applications:

- Runnability at professional laser printing machines and copy machines

- Register

- four color laser printing / offset printing
    - rotogravure printing, decor printing

- Waviness at web offset

- Staple problems at professional offset-, copy and laser printing paper

- Special applications:

- pre-impregnates
  - plastic foils
  - wall papers
  - special filter paper

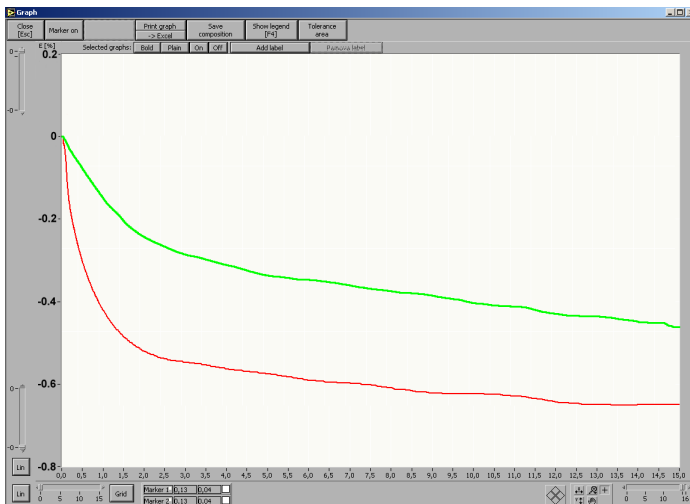
- Measuring results: shrinkage-time-diagram, shrinkage at a time point t

- Main User:

- producer of paper, board, foils
  - producer of printer, copy machines, printing machines

## Features

- Temperature adjustment via PC software
- Includes measurement of paper moistness and humidity, ambient temperature
- Change in dimension in MD and CD can be measured separately
- Measuring results:
  - Dimension-Time-Diagram
  - Change in dimension at a selectable time point
- Measuring range:
  - Stretching up to approx. 27%
  - Shrinkage up to approx. 5%
- High accuracy
- Measuring temperature: from ambient temperature up to max. 230°C
- Efficient and user-friendly Software
- Export of the measuring data into MS EXCEL with a single mouse click
- Easy to handle
- Compact and robust construction
- Non interference prone



Shrinkage of two different LWC papers with 50% relative moistness at a temperature of 130°C

Goal: Characterization of the tendency of waviness with offset printing

## Technical Data

- Range of temperature: from ambient temperature up to 230°C
- Operating voltage: 115V 60Hz / 220V 50Hz
- Sample dimension: 60mmx200mm (MD/CD)
- Dimensions: HxWxD 295 x 280 x 320 mm
- Resolution: 0,013%
- Weight: approx. 15 kg
- Accuracy: +/- 0,05% abs. +/- 5%rel.