Knowing paper better!

Since 1992 Partner of Paper Industry
Since 1996 Partner of Printing Industry

Innovation and Competence
Development, Manufacturing and Sales

emco DDPM - Dynamic Expansion Module

The *emco* DDPM - expansion module as a modular component of the DPM system solution for determining the dynamics of the wet expansion of paper

Measuring system

emco DPM - Dynamic Penetration Measurement

Methods

The simultaneous measurement of wet expansion and ultrasonic transmission offers a complex assessment of the paper that is only possible with the ***emco* DPM**.

- ⇨ ***emco* DPMprint** method for determining the printability and runability
- ⇨ Method for determining the dynamics of dimensional changes in paper (long-term stability, labels)
- ⇨ Replacement of the classic Fenchel method

Technical data

Measuring range:	-5 % to +15 %
Measuring surface:	50 mm x 50 mm
Resolution:	approx. ± 0.024 %
Test liquid:	distilled water *)
Measuring time:	unlimited
Calibration:	cal. standard
Zero adjustment:	automatic
Initial load:	variable 0...0.5 N

*) Standard test liquid; other liquids, solvents, printing inks, coating colours etc. can be used with the cell insert

The ***emco* DDPM** dynamic expansion module is a modular accessory for the ***emco* DPM**.
Devices that are already in use can be upgraded without any problems.

Performance parameters:

- Measurement of dynamic wet expansion in %
- Measurement without effect of an initial load
- Measurement with contact to the medium on both sides
- Measurement possible in machine (MD) and cross direction (CD) of the paper
- Use of ***emco* DPM** accessories (cell insert for special liquids, temperature control)
- Measurement of dynamic expansion and shrinkage in the climate
- Software package **Calculator - Viewer** for evaluation of the measurement data

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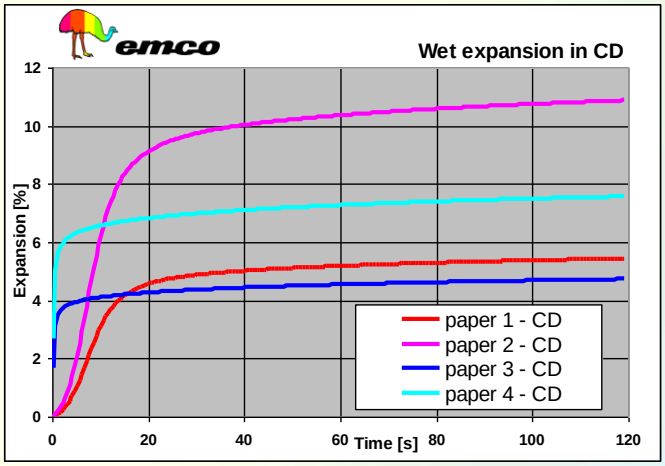
Dimensional change to assess long-term stability

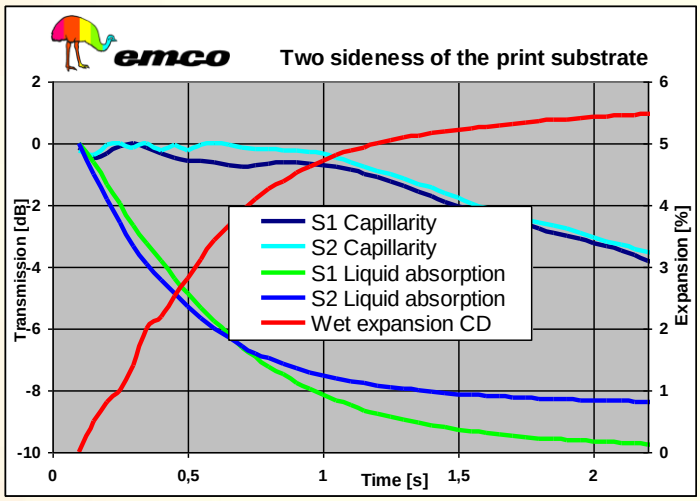
Measurement of the dynamics of expansion and shrinkage in the climate (temperature and moisture change)

Determination of the dynamics of the E-modulus change in the presence of water with reference to web tension settings

- Long-term stability of ink layer films and varnish layer films
- Evaluation of plane position, waviness, stretch and overhang
- Compatibility of different papers in a printed product



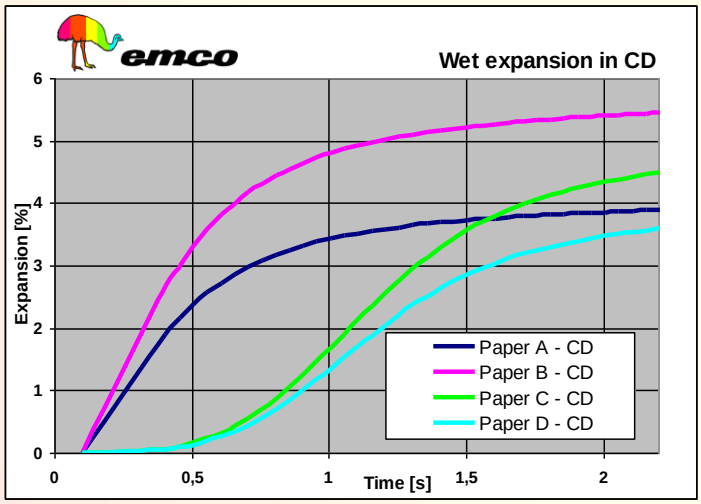
Evaluation of printability and runability



Printability

The measurement of wet expansion (cross direction) is carried out in the printing process relevant time range.

- Evaluation of the fan-out-potential
- Comparison of capillarity and water penetration of the printing substrate



Runability

- Fan-out-potential
- Dimensional changes of the paper during printing and further processing
- Dynamics of tension - expansion - changes with water absorption in the printing process with reference to web tension settings

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