FRT
FIBRE RISING TESTER

The fibre rising tester enables evaluation of a paper's surface properties in minutes, without printing.
It measures the content of long and short fibres extending above the surface. These numbers correlate to the linting and gloss reduction which can appear during printing because of the stress from moisture and heat exposed to the surface.
The FRT instrument can simulate this stress and predict linting, gloss reduction or coating problems during later production steps.

Models

- FRT 1000
- FRT 1090

Concept

The concept of a paper strip is optionally treated with a preselected volume of liquid i.e. water or fountain solution. The liquid is applied to an area along the center of the strip. As the contact time between the liquid being applied and the paper is constant, the amount absorbed will depend upon the paper's natural sorptive properties.
After the liquid has been applied the paper is rapidly dried with an IR-heater to a preselec-ted surface temperature. The stress cycle of moisture and heat can be repeated several times to simulate multi-colour offset printing.

In the inspection unit a video camera detects the structural changes induced by the combined moisture and drying treatment on the paper surface. The long and short fibres extending above the paper surface correlate to linting and gloss reduction found after printing.

Features

- Measures fibre rising, fibre roughness, number of lifted fibres and fibre length involved in linting, gloss reduction (roughening) or tissue softness
- Optical non-contact evaluation of the paper surface
- Simulates the surface stress from moisture and heat
- Shows absorption at a constant contact time of one millisecond
- Full test cycle of hundred images in 60 seconds
- Detects two-sidedness
- Windows® based software provides user-friendly test set-up, analysis and reporting

Physical specifications

Dimensions
110 x 28 x 30 cm (WxDxH)

Net Weight
16 kg

Performance data

- Moisturising unit

Volume applied
0 - 9.9 grams/m2

Contact time
1 millisecond

- Heating unit

Surface temperature
ambient - 199 °C

Drying time (110 °C)
3 seconds

- Inspection unit

Field of view
4 mm wide

Image resolution
0.008 mm

Test time (100 images)
< 60 seconds

Power supply
110-220 V, 50/60 Hz

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