

Automated Moisture Measurement for web and scroll material [i.e. decor paper]

Product Description

VenScan-LMS combines the proven measuring system VenScan with the automated manipulator unit named LinearMotionSystem (LMS).

LMS had been designed to be used for web and scroll products. The unit should be integrated into the production process at a suitable position for measuring the moisture content of the product.

The measuring data will be stored continuously on the provided workstation, their values will be indicated and/or shown on corresponding diagrams.

The sensor is working at a fixed and well-defined position, related to the edge of the product.

This position will be strictly preserved, even with a varying broadness of the product.

If need be (i. e. in conjunction to a product change), the unit may be removed completely from the production process.

VenScan-LMS consists of a gap-sensor integrated into a driving unit, including an electronic unit plus cabinet, a moving track plus switch cabinet and the workstation with keyboard, mouse and monitor.

The Measurement Principle

VenScan-LMS is working in accordance with the 2-Parameter-Microwave-Resonance Principle.

This principle does allow density independent moisture measurement, by utilising the effect of frequency dependent energy loss of rotating water molecules in a microwave field. By taking into account the variation of the microwave signal's propagation speed, the principle is eliminating the influence of the density at the same time.

Therefore, the moisture measurement does work independent from the product's density, structure, colour, temperature and velocity.

Service

Döscher & Döscher is offering remote maintenance for all of their systems.

Modifications of the system settings as well as trouble shooting can be achieved instantly from our headquarters in a direct dialogue with the customer.



Components

	Gap Sensor Head
	Switch cabinet
	Terminal
	LMS = Linear Motion System

Technical Specifications

Measuring range:	0 - 20% moisture
Repeat accuracy:	1 % of final value of selected measuring range [i.e. measuring range 0 - 10%: 0,1% accuracy]
Measuring time:	up to 1000 measurements per second, Moving mean adjustable via software
Power supply:	24 V DC, 10 A
Product temperature:	0 – 70 °C [32 - 158°F]
Ambient temperature:	0 – 40 °C [32 - 104°F]
Number of different products:	16 [products with similar characteristics in the same group]
Interfaces [Workstation]:	
- Remote Service	Modem [optional: ISDN-Controller or VPN]
- Serial	RS422 [for connection of a further VenScan-LMS]
Interfaces [Sensor]:	
- Analogue	4 – 20 mA, moisture and temperature
- Digital	4 x Input [24 V DC]; 4 x Output [24 V DC, 250 mA]
Dimensions and weights	
- Sensor head	Size: 440 mm x 220 mm x 210 mm, Weight: 10 kg
- Measuring-Gap	Size: 20 mm x 200 mm
- Switch cabinet	Size: 300 mm x 300 mm x 150 mm, Weight: 5,5 kg

Technical specifications are subject to change.

Applications

Industries:	Paper, Decor paper, Impregnation
Materials:	Paper web and impregnated paper



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