

VenScan



Automated moisture
measurement for
wood, paper and textile
industry

VenScan

Automated moisture measurement of band- and plate-shaped materials



Product Description

The VenScan has been developed for industrial applications in the textile, wood and paper industry, especially for band- and plate-shaped materials. It can be built flexibly into the production process of such materials and measures continuously the water content of the product.

The measuring system consists of two measuring probes, cabinet and terminal. The two probes are installed opposite to each other in a fixed distance in the production line. The product to be measured is led contactless through the gap of the probes. The electromagnetic field is established between the probes. Every product passing this electromagnetic field is changing the characteristic of the field which will be analysed.

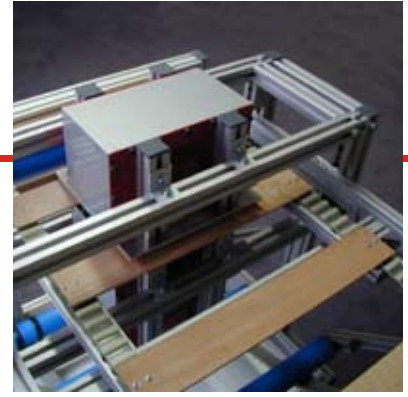
Unlike conventional methods with transmitter and antenna, this new concept, consisting of a combination of transmission and resonance method, the measuring signal penetrates the product very often. A very intensive reciprocal effect between field and water molecules in

the product arises, which leads to a very high sensitivity and accuracy of the water content measurement.

The electromagnetic field between the two probes is very homogeneous. Thus, an accurate measurement of the product inside the sensor gap is possible independently from its spatial position. Moreover, even materials with high passing speeds can be measured reliably due to the system's high measuring frequency. The measuring-method works without heating treatment, and independently from density as well as thickness of the product, in fractions of a second. The characteristic of the method are contactless measurement, low calibration expenditure, high measuring accuracy and excellent long-term stability.

Döscher & Döscher's special support: Remote maintenance of the measuring systems. Directly from the Hamburg Headquarters, support and maintenance work can be accomplished online per direct dialogue with the customer.





Advantages

Microwave based measuring technique

- simple calibration through independency from density and thickness of the material
- accurate and fast measurement
- independent from colour, structure and surface of the product
- measures core and surface moisture
- long-term-stability

Improvement of production

- quality assurance
- reduction of rejects
- reduction of complaint costs

Optimized process

- automated processing
- current availability of process-information
- fast and early enough recognition of malfunctions

System Operation

- measurements are traceable on monitor
- on-line support available
- simple calibration procedure
- extensive evaluation and visualization available [optional]
- long-term documentation by data storage of all measured values

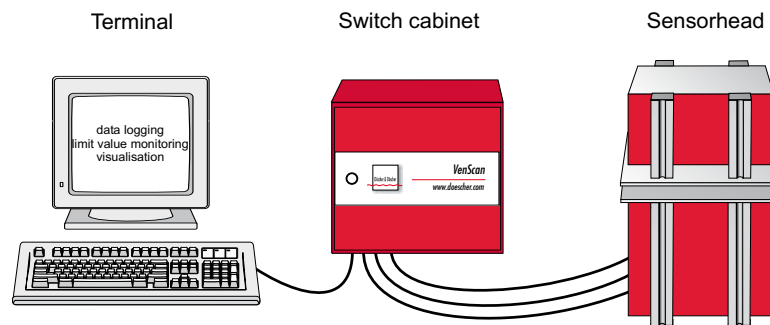
Your Benefits

- Your production is continuously informed in a timely manner
- Your production costs will be reduced
- Your product quality will be achieved faster
- Your rejection will be minimized
- Your process cycle time will be optimized



VenScan

Components



Technical Data:

Measuring range:	subranges to select, depending on probe and product
Repeat accuracy:	1% of the final value of the selected measuring range [i.e. measuring range 0 - 10%: + 0,1% accuracy]
Measuring time:	up to 1000 per second, moving mean adjustable by software
Power supply:	24 VDC; 1,2 A
Temperature	
- product:	0 – 70 °C
- ambient:	0 – 40 °C
Number of different products:	16
Max. number of data sets:	up to 200.000
Storage medium:	hard disc drive
Interfaces:	
- serial:	RS422 for connection of terminal
- analog:	4 – 20 mA, moisture and temperature
- digital:	4 x In- and Output
Size and weight	
- sensorhead:	250 mm x 250mm x 500 mm, weight: 10 kg
- switch cabinet:	300 mm x 300 mm x 150 mm, weight 5,5 kg

Technical data are subject to change.

Field of Applications:

Industries:	wood, textile, paper
Materials:	band-shaped materials, i.e. paper webs plate-shaped materials, i.e. lamellae

For further information, please refer to:

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