Fagus GreCon

MOISTURE MEASUREMENT

ENSURING QUALITY
AND CONSERVING RESOURCES

OPTIMUM PRODUCTION CONTROL

RELIABLE MOISTURE READINGS - THE BASIS FOR COST REDUCTION

Detecting quality deviations at an early stage, taking effective countermeasures and optimising the use of resources: These are just a few of the challenges we can help you overcome with our measurement technology systems. No matter whether you dry, mix or otherwise process material: The moisture of the resulting product is one of the most important quality characteristics.

GreCon moisture measuring systems provide highly accurate and reliable values of the material moisture and make them available to you for quality assurance and production optimisation. It is irrelevant whether measurements are carried out in continuous or batch operation, on bulk materials or plate-shaped individual pieces.

Depending on the application, task and installation conditions, our systems use the optical infrared measuring method or the penetrating microwave measuring method. Designed with the various transducers available enables our systems to measure the moisture of a wide range of materials. The material properties solid and loose are covered as well as different colour properties and product temperatures.

CONSISTENT PRODUCT QUALITY

EXPLOITING SAVINGS POTENTIAL

In addition to the requirements for consistent product quality, energy savings and the associated cost controls are very important. By continuously monitoring the moisture content, the dryer setting can be optimised in a controlled manner. For example, energy efficiency can be increased by reducing the drying temperature or the cycle time through the dryer, which leads to a reduction in production costs.

In other processes where the material moisture is influenced by the material mix, the product quality can be optimised. Here, quality costs can be reduced through avoided complaints and optimally tracked through the log function of the measuring system. As a result, using a GreCon moisture measuring system pays off quickly.

YOUR ADVANTAGES AT A GLANCE

- Increased energy efficiency = reduced production costs
- Simple referencing of readings
- Continuous quality control and logging
- Feedback of the readings for production control

	IR GCP	IR GCI	MW XT	MW EX	MW	MW VS	MW VS XL	MW LMS
Measuring method	Infrared		Microwave					
Product temperature	5°C to 95°C	5°C to 95°C	3°C to 140°C		3°C to 70°C			
Ambient temperature	0°C to 50°C (optional -15°C / -30°C)	0°C to 50°C	0°C to 45°C					
Measuring range	0 to 30, 30 to 150% atro		0 to 18% atro					
Repeatability	0.1%	0.1%	0.1%					
ATEX approval	Zone 22	Optional	-	-	Zone 20	-	-	-
Maximum material thickness	-	-	-	-	-	10 mm	50 mm	10 mm
Measurement type	Contactless, superficial		Contact, penetrating			Contactless, penetrating		
Material flow	Continuous and discontinuous (optional)		Continuous and discontinuous			Discontinuous		
Measuring spot	60 mm		120 mm			20 x 200 mm		
Measuring sensor	Optical sensor		Ceramic ring sensor			Gap sensor		

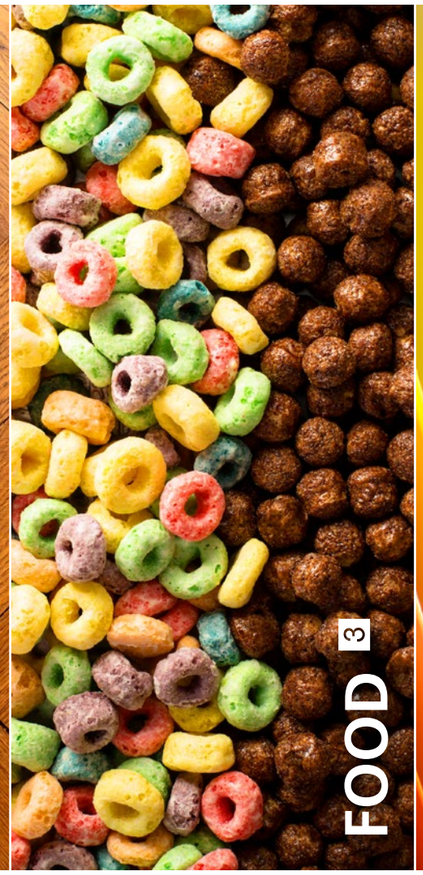
A WIDE RANGE OF VARIANTS ENABLES OPTIMAL SOLUTIONS

GreCon moisture measuring systems are available in two basic configurations as MOISTURECONTROL IR and MOISTURECONTROL MW. These configurations are selected according to the measuring task and installation situation. Numerous aspects must be taken into account when designing the moisture measuring system suitable for your production process. For example, the type of material, the material transport as well as the product temperature and the required measuring range determine which variant of these configurations is used.

For bulk materials with good mixing and transport on a conveyor belt, the non-contact MOISTURECONTROL IR is used. The same material in a drop shaft or chute is measured with the contacting MOISTURECONTROL MW.

For higher temperatures, special system variants such as the MW XL or MW EX version are available.

The MW VS and MW VS XL versions of MOISTURECONTROL MW are used for plate-shaped materials in discontinuous measuring operation. Paper or foils as continuous webs can be measured with MOISTURECONTROL MW LMS.



APPLICATIONS

EXPERTISE FOR EVERY INDUSTRY

Different materials require different transducers to determine their moisture content. We are able to meet these different requirements with the transducers available.

1 There are many different processes and material forms in the wood-based material industry. Here, the infrared and microwave transducers are used to an equal extent. The microwave measuring heads with a gap sensor in the MW VS and MW VS XL versions are particularly suitable for measuring the boards produced.

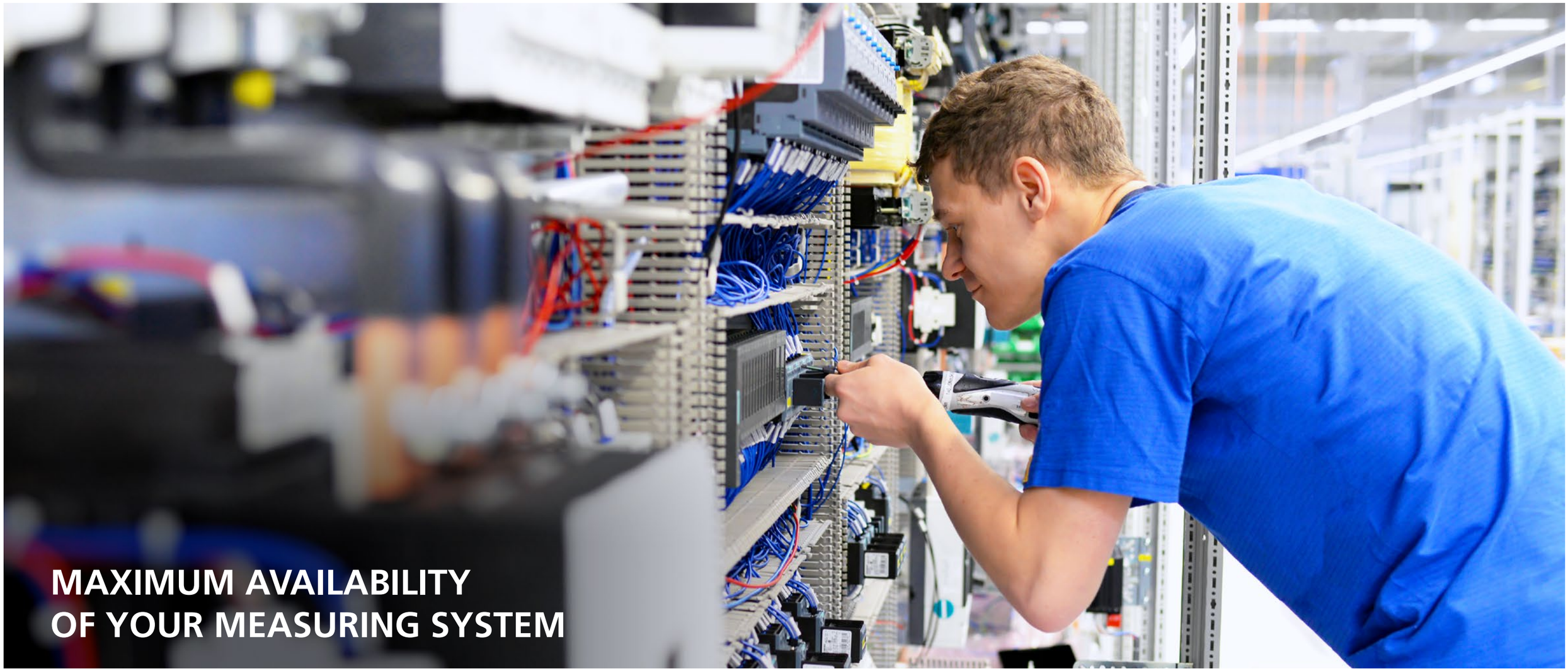
2 The penetrating microwave measuring heads with a gap sensor are used in the wood processing industry (e.g. furniture, laminate, parquet, panels) with their solid panel-shaped materials. The MW VS and MW VS XL measuring systems, which are designed for discontinuous operation, deliver the best measuring results here.

3 In the food industry, it is mainly continuous product flows that occur. Here, depending on the measuring range and product temperature, the appropriate measuring systems are used.

4 MOISTURECONTROL MW VS LMS is specially adapted to the requirements of the paper and film industry. The system's sensor automatically moves out of the production line for independent calibration.

5 In the animal feed industry, depending on the type of product conveyance, the measurement is carried out, for example, on a conveyor belt with the infrared system IR or in a chute with the MW or MW XT microwave systems. At both installation locations, the product temperature must also be taken into account when selecting a suitable sensor.

6 MOISTURECONTROL MW or MW XT are particularly suitable for use in the tobacco industry. The great advantage of these sensors is the measuring field that penetrates the product under measurement. This reliably shows even superficially hidden moisture fluctuations.



MAXIMUM AVAILABILITY OF YOUR MEASURING SYSTEM

THE INDIVIDUAL SERVICE YOU REQUIRE

Maintaining the maximum availability and reliability of your GreCon systems is what we stand for. Our worldwide service network supports you in the implementation and maintenance of your GreCon systems. With the individually combinable service modules from our customer service programme, you have exactly the service you need at all times - no matter when and where you need it.

From on-site project planning and installation support to commissioning, inspection or maintenance, we put together the service package tailored to your needs, providing you at all times with the optimal solution to avoid downtimes and reduce malfunctions to a minimum. We support you wherever you need us. Naturally, this includes online.

SATELLITE - SECURE, SIMPLE AND FAST

With the remote support SATELLITE*, GreCon experts are on hand worldwide for urgent questions or should your GreCon system malfunction. Via remote diagnosis, we help you to make your GreCon system available again safely, easily and quickly. Access to the data history enables a targeted and quick analysis of the cause of the fault.

GreCon-SATELLITE allows on-site operations to be better prepared and possibly even completely avoided.

*Connection to PC system in the network required

PIONEERING SPIRIT, PASSION AND INNOVATION

We are more than just a company, we are a community where pioneering spirit and passion for excellence are our driving forces. Our employees are the key to our success, and our customers are our partners on the path to outstanding solutions.

In 1911, Carl Benscheidt founded Fagus GmbH for the production of shoe lasts and punching tools. His great-grandsons Ernst and Gerd Greten integrated the companies GreCon-Anlagenbau and GreCon-Elektronik. Numerous inventions originate from this merger, including shoe lasts for the right and left foot; measuring technology to record thickness, surface characteristics or the weight by X-ray; the industrial spark extinguishing system.

Today's Fagus-GreCon Greten GmbH & Co. KG is a family business in its fifth generation. Fagus has stood for precision and fit for over 100 years and is an established partner for the international shoe industry. GreCon has been supplying sophisticated solutions for a wide range of applications in various industries in the "fire protection" and "measurement technology" sectors for 50 years. Thanks to numerous innovations and the commitment of our more than 700 employees worldwide, we have been able to establish ourselves as a leading international partner for our customers in each of these areas.

The UNESCO World Heritage Fagus Factory is a special fourth business unit as a cultural enterprise within an industrial setting. In 2011, the building complex at the Alfeld site was listed as the "UNESCO World Heritage Fagus Factory". The Fagus factory built in 1911 as the first building of the architect and founder of the Bauhaus, Walter Gropius, is considered the origin of the modern era of architecture.

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