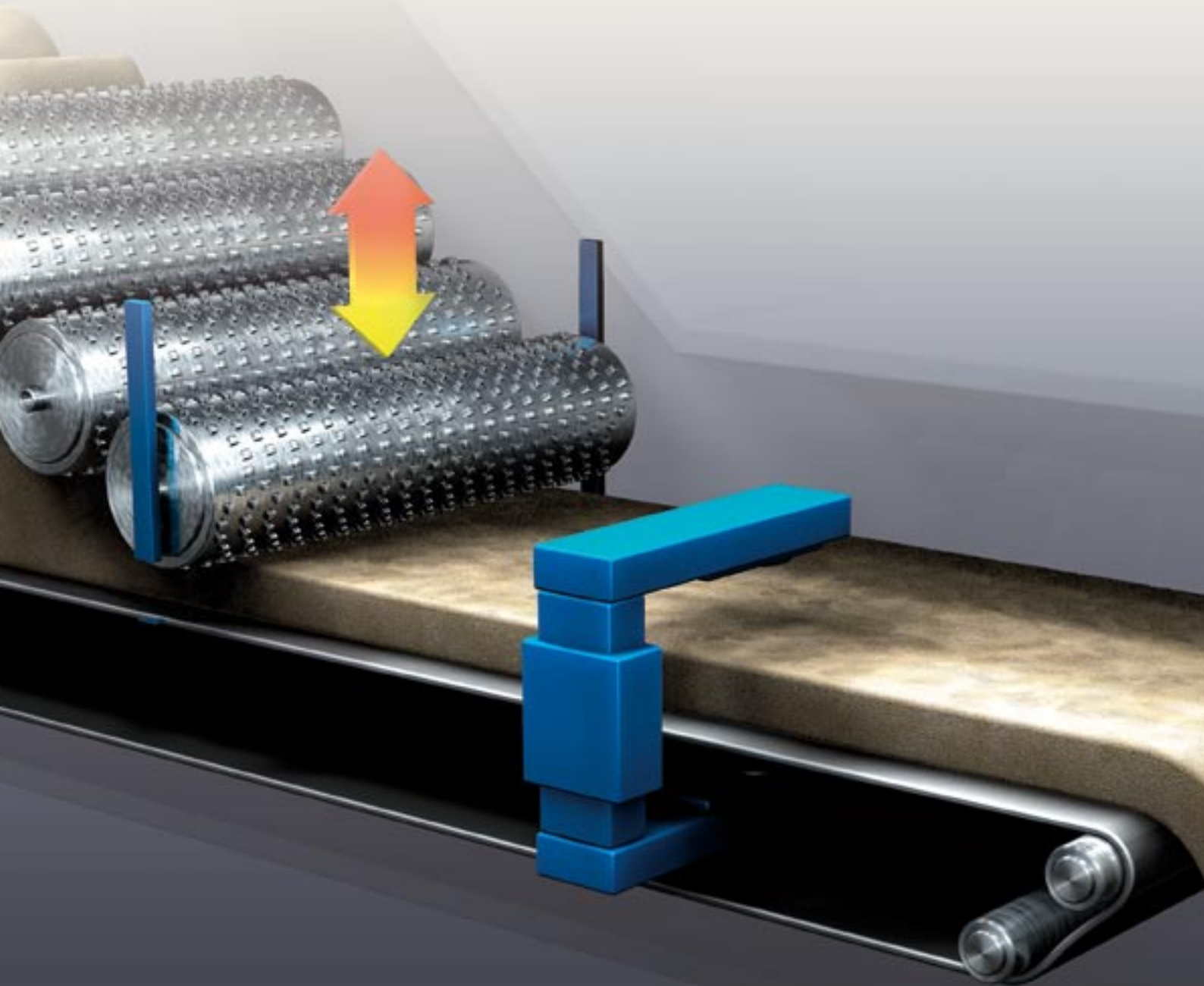


**BWS 3000**

Online Weight Per Unit Area Scale  
with X-Ray Technology



GreCon®

# Production Control with the GreCon Weight Per Unit Area Scale

Exploit all reserves of your production, homogenise your process, increase the availability of your equipment and increase your profit.

Fluctuations in the material distribution cause increased production costs and reduced quality.

The Online Weight Per Unit Area Scale BWS 3000 allows automatic monitoring and regulation of the material distribution.

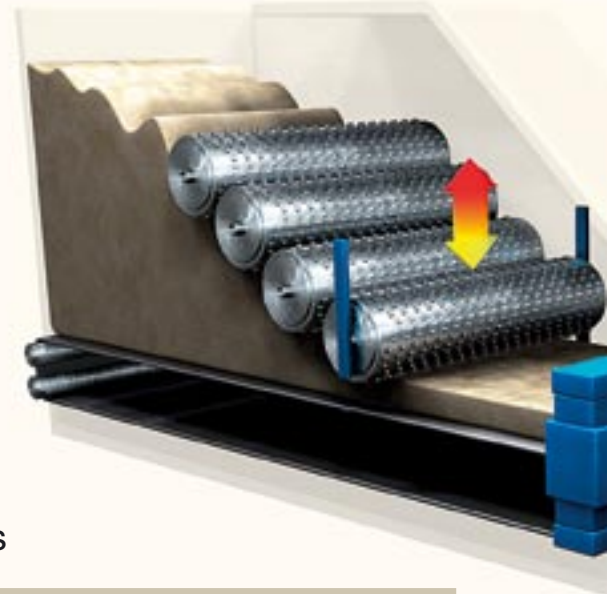
The system keeps the fixed weight per unit area in the measuring position, even with changing wood assortments and different chip sizes. A visualisation computer shows the measured values and makes an easy parameterisation of the system possible. The BWS 3000 is installed directly in the forming station or at the dosing or forming belt. Special features of this system are minimal need of space, high measuring accuracy and indifference to interfering surroundings, such as dust, vapour and high material temperatures.

Compared with other measuring methods, the advantage of the BWS 3000 is that even minor fluctuations in the material distribution can be recognised and automatically compensated.

## Measuring Principle

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The weight per unit area scale is working in a non-contact way. The material to be measured is penetrated by x-rays or radioactive beams. Depending on the amount of material and the specific weight of the material, the radiant intensity measured by the sensor is changed. This is the measure for the weight per unit area ( $\text{kg/m}^2$  /  $\text{lb/ft}^2$ ). Different measurement transducers are available, depending on material structure and installation place. A high-precision x-ray system is used for applications in the wood based industry. For the penetration of mineral products, such as gypsum and cement board or mineral wool mats, a radioactive source is required.



## Interfaces

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The weight per unit area can be automatically regulated by changing the speed of the forming or dosing belt. For this purpose, an analog output signal is provided. Alternatively, voltage-free relay outputs are available for the regulation of the material quantity with height-adjustable rakes.

## Software

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The visualisation software of all GreCon measuring systems is based on Windows. The software of the BWS 3000 consists of the following program modules:

- Recipe Management

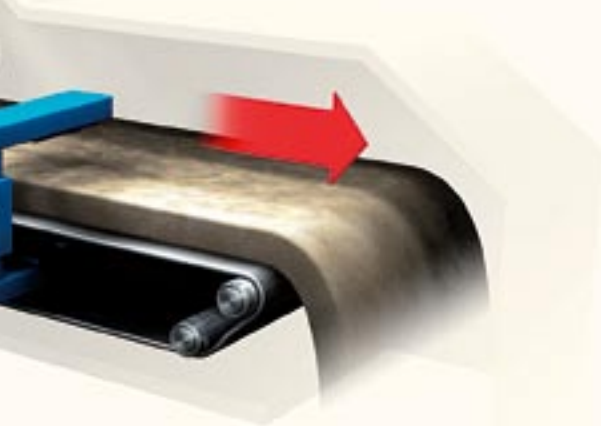
This is a product data base in which different panel types and production parameters, which are relevant for the measuring system, can be stored.

- Visualisation

The core of the software package is the visualisation software. It records, stores and graphically represents all measured data. The simple menu structure, which is identical for all GreCon measuring systems, makes an intuitive operation possible. Clear information and graphics enable the operator to quickly and effectively adjust the running production process.

## Technical Specifications

Measuring system with C-frame,  
installed in forming station or forming belt,  
controls the belt speed or height-adjustable rakes



### ■ History Data Base

This data base stores the measured values and provides a function to export them to other file formats for further processing and evaluation.

## Network Connections

For the data transmission to higher-ranking process control systems, different interfaces, such as NET DDE, Allen Bradley Ethernet or Ethernet with TCP/IP or H1 BUS protocol, are available.

## Online After-Sales Service

GreCon measuring systems are equipped with a modem, by means of which a direct connection to the GreCon after-sales service can be made. Support, changes in parameters, software updates and trouble shooting are all possible online.

- Mains voltage: ..... 230 V / 115 V
- Frequency: ..... 50 Hz / 60 Hz
- Power consumption: ..... 500 VA
- Compressed air supply: ..... 6 bar / 90 psi
- Compressed air consumption: ..... approx. 5 l/min / 0.18 cfm
- Measuring range: ..... 0 to 40 kg/m<sup>2</sup> / 8.19 lb/ft<sup>2</sup>
- Measuring accuracy with x-ray tube: .. ± 0.25 % of the end value of the measuring range ..... (max. 30 g/m<sup>2</sup> / 6.1 lb/ft<sup>2</sup> attainable)
- X-ray tube: ..... 33 kV, 0.2 mA
- Measuring accuracy with radioactive source: ± 0.5 % of the end value of the measuring range ..... (max. 50 g/m<sup>2</sup> / 10.24 lb/ft<sup>2</sup> attainable)
- Radiation source: ..... Americium 241 (300 to 500 mCi)

## References

- Particleboard
- Wood cement
- Wheat straw chips
- Synthetic granulates
- Mineral wool
- Insulating mats
- Car preforms



# GreCon



Fagus Factory, constructed by Walter Gropius in 1911

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