Online Microwave Moisture & Density Deviation measurement analyzer for Recycled Paper & Cardboard

Accurate detection of moisture levels inside Recycled Paper & Cardboard Bales is crucial for quality control, storage and process management as well as pricing. Manufacturers are therefore looking for a cost-effective system that can scan the material easily and accurately.

The MMA-2020 is a non-contact online analyzer, which scans the volume of Recycled Bales and measures its internal moisture. Based on MALCAM’s highly successful series of analyzers, the MMA-2020 provides a solution to a pressing need for fast and highly accurate water content determination in the various stages of paper & Cardboard recycling, without any interruption to the process.

Main Features

- Informed purchasing management decisions
- High performance resolution — better than 2% from the reading
- High accuracy — ±4.7% from the reading
- High repeatability — ±0.01% from the reading
- Volumetric measurement of material
- Online measurement with no interruption to process
- Very low maintenance costs
- Easy, simple and infrequent calibration
- Real time results
- No physical contact with material
- Not sensitive to ambient conditions
- Can work under tough environmental conditions
- Automatic storage and analysis of results
- compliance with all major industry standards
The MMA-2020 provides better mapping accuracy than any of the traditional online or laboratory measurement methods in use today. Operating under both digital and analog links, MMA-2020 enables instant availability of all analysis results and data throughout the enterprise.

The MMA-2020 is designed with a completely open architecture, enabling the creation of totally integrated system customized to specific plant requirements, and the incorporation of any combination of accessories and services. Connectivity to plant process control systems is facilitated via RS-232/422 or Ethernet (TCP/IP, MSQL), analog industry standards (4-20mA, 0-10V) and other data links (RS-232, etc.). Connectivity can also be customized, if required, to data links such as DeviceNet and Profibus (optional).

The MMA-2020 offers an optional easy-to-read graphic displays, which allow buyers, engineers, plant managers and executives to interpret process conditions and make decisions, thereby reducing material costs and improving quality.

Main Benefits

- Efficient purchasing management
- Increase product quality and value
- Enhanced storage management control
- Optimize process control
- Low cost and fast ROI

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Specifications

Output Signals
- Moisture level: 0V–10V or 4–20mAmp.
- Communication links: RS-232, TCP/IP
- Moisture display and measuring indicator.
- Uniformity of the scanned bale.

Input Signals
- Supply Requirements: 220/240 VAC 50hz (15A max)
- Bales height—Acoustic sensor (integrated)
- Bale's weight—manual or via RS-232 or via TCP/IP.

Environmental Conditions
- Operating Temperature: 5–40 °C
- Storage Conditions: -20–60°C
- Humidity Operation: 20–80 % non-condensing.

ABOUT MALCAM

MALCAM Ltd. is an ISO-9001 company that specializes in online and offline moisture and density deviation measurements systems and advanced software tools for industries that automatically process bulk and packaged material. Established in 1996, the company holds several international patents and its systems are operational in hundreds of sites worldwide.