**MMA-3020**

**Online microwave moisture and density deviation measurement analyzer for rubber bales**

- Improves product quality
- Ensures product uniformity
- Integrates easily
- Provides full process control
- Increases yields
- Reduces waste

**Main Features**

- Online, real-time results
- Highly accurate—volumetric analysis
- Real-time alert for inconsistencies in product
- Automatic analysis & storage of results
- No removal of packaging
- Not sensitive to ambient conditions
- Complies with ASTM laboratory measurement standards

**Overview**

MMA-3020 analyzers provide plant management with better understanding and control of the process through online volumetric moisture and density measurement (scanning through the rubber bale and not only its surface).

Malcam's smart analyzers and related software tools can provide real-time alert upon detection of rubber bale's inconsistencies. Enabling the highest level of end-product uniformity and quality.

The MMA-3020 is designed with a completely open architecture, enabling the creation of totally integrated systems customized to specific plant requirements, and the incorporation of any combination of accessories and services.

Plant managers and engineers are provided with valuable data, statistics and analyses on the entire manufacturing process, enabling smart online interpretation of process conditions and real-time decision making to improve process efficiency, reduce waste and increase quality.
WinBale 4 S/W Platform

- An Easy-to-use User Interface providing the customer with graphical display options and many automation options.
- SQL Based Database for data storage.
- Report generation tools.
- Multiple connectivity options for data sharing throughout the facility.
- Multiple Fail-Safe mechanisms and alerts to insure a smooth and consist run.

High Resolution Profile Display Graph (per Bale)

- Microwave signals are transmitted through the rubber bales and collected on the other side.
- Data is compared to calibration values of the corresponding microwave signal parameters.
- Automatic pattern recognition statistical analysis is applied to the MMA System's results.
- Accurate relevant patterns characterizing the analyzed rubber bales are presented statistically.
- Information which is directly applicable for online QC/QA feedback control is generated.

MMA-3020 Operation

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Other Optional Components

- Barcode reader, enabling the WinBale platform to read information directly from bale labels.
- Barcode printer, prints out any type of information generated or collected by the MMA-3020 system and the barcode reader.
- Temperature sensor, providing the estimated average temperature of the measured material.
- SDS-20 smart database sharing system, providing easy, user-friendly access and management of collected data from various platforms.