

## MMA™ - 9020

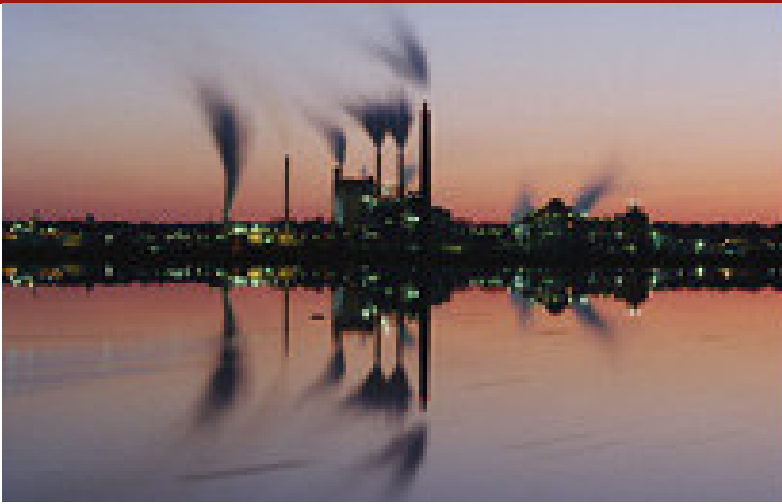
# Online microwave moisture and density deviation measurement analyzer for PPM level chemical powders

### MAIN FEATURES

- High performance resolution — better than 30 PPM
- High accuracy — better than 100 PPM
- High repeatability — better than 95% of reading
- Volumetric moisture and uniformity measurement
- Online measurement with no interruption to process
- 2D area zone profiles. Alert & Reject signals
- Real time results
- Display & Record database
- No physical contact with material
- Not sensitive to ambient conditions
- Automatic storage and analysis of results
- compliance with all major industry standards

The MMA-9020 is a non-contact online analyzer which scans whole volume of chemical powder (dry powders, PTFE etc.) in drums/packages, and measures its internal moisture content at a PPM level accuracy.

The MMA-9020, which uses volumetric sub-Tera-Hz microwave tomography technology, provides highly accurate results in real-time, enabling online process control and enhanced quality assurance.

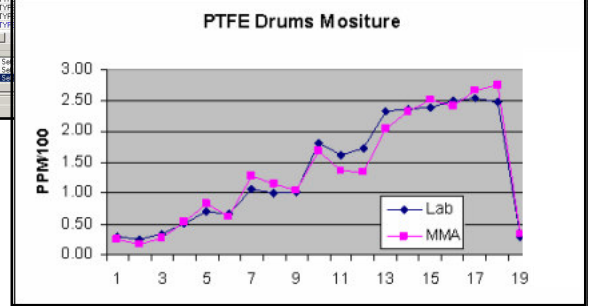
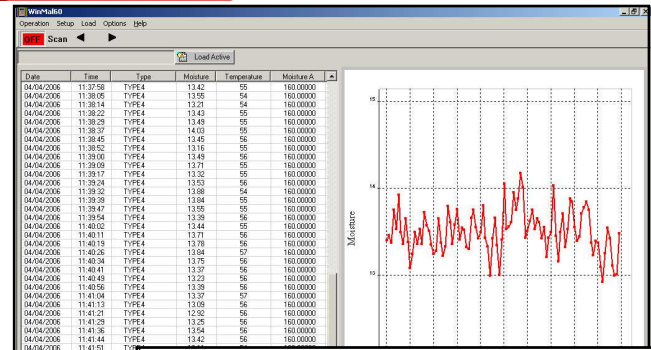


## MAIN BENEFITS

- Increase product quality and value
- Increase production yields
- Enhanced process control
- Optimize manufacturing efficiency
- Low cost and fast ROI

Upper graph—WinMal s/w enables display graphs , data base recording, scenarios setup, testing and calibration of the MMA-9020

Lower graph—High correlation of moisture measurements between laboratory results and MMA-9020 results (PPM level)



The MMA-9020 provides better mapping accuracy than any of the traditional inline or laboratory measurement methods in use today. Operating under both digital and analog links, MMA-9020 enables instant availability of all analysis results and data throughout the enterprise.

The MMA-9020 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 ( optional) Ethernet (TCP/IP), analog industry standards, remote control and data logging, and other data links. Connectivity can also be customized, if required, to data links such as DeviceNet and Profibus (is optimal).

The MMA-9020 offers optional easy-to-read graphic displays, which allow engineers, plant managers and executives to interpret process conditions and make decisions, thereby reducing material costs and improving quality.

## SPECIFICATIONS

<b>Output Signals</b>	0V-10V or 4-20mAmp.
<b>Input Signals</b>	Supply requirements 2/115/220 VAC 50/60hz (15A max)
<b>System weight:</b>	~100kg, excluding the cabinet weight
<b>Operating Temperature</b>	5°C—40 °C
<b>Humidity</b>	40-60%, non-condensing.
<b>MCP-Tool s/w</b>	Malcam's Loading Calibration and other parameters software tool via RS-232 , running under any Win2000 or XP windows PC



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## 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.