

MOISTREX MX8000

PAPER MOISTURE ANALYZER

For Precision Moisture Measurement in Seconds

Applications:

- ▶ Tissue and towelling
- ▶ Newsprint
- ▶ Lightweight coated base
- ▶ Supercalendered magazine
- ▶ Fine graphic papers
- ▶ Corrugating & liner
- ▶ Coated paper & board
- ▶ Multilayer board
- ▶ Specialty papers

Features:

- ▶ Measurement results in seconds
- ▶ Safe, non-destructive
- ▶ Easy to use
- ▶ Moisture range 1-15%
- ▶ Can be incorporated into ISO quality systems



The Moistrex MX8000 moisture analyzer provides fast, accurate at-line benchtop moisture measurement in seconds compared to traditional loss-on-drying methods. Its fast measurement performance means it can be used quickly and effectively to test product samples taken from a paper machine as well as testing supplier stocks and in-coming paper products before they are used in conversion processes. The instrument only measures the water-bound to the cellulose fibers and is insensitive to printing, surface treatments and plastic laminations

The stability and performance properties of the MX8000 provide precision at-line moisture measurement. A smart detector module coupled with high-precision oscillator delivers accurate measurement performance across the entire paper and board range with repeatability better than $\pm 0.1\%$.

The solid alloy test plates quickly stabilize the sample, while an integrated sensor automatically compensates for temperature.

Since the instrument uses microwave technology to measure moisture, polythene and plastics do not affect the measurement. Therefore paper samples can be stored on polythene bags and presented to the MX8000 for measurement testing. This preserves the integrity of the samples and prevents moisture conditioning between the sampling point and testing.

The MX8000 is delivered as a pre-calibrated instrument for instant results. Each instrument is supplied with its Certificate of Conformance and can be tested and calibrated by NDC either annually or as required. The MX8000 is manufactured within a framework of the ISO 9001: 2008 quality system

Technical Specifications

Theory of Operation

The MX8000 incorporates a waveguide down which a microwave signal is transmitted. When a paper sample is inserted, the waveguide is split into two. The water molecules within the paper or board sample attenuate the microwave signal which is proportional to the amount of water in the paper. The detector measures the microwave loss and converts this signal into a percent moisture value.

The measurement is unaffected by color, printing, surface finish or sizing. Because the measurement technique measures through the paper or board sample, it is unaffected by any moisture stratification.

The MX8000 achieves reliable, accurate measurements throughout the entire paper and board range. By simply entering the grade details and the nominal basis weight, the MX8000 automatically adjusts the settings to give a reliable, accurate measurement.

In addition to the factory pre-settings, the user can configure and store settings for up to 90 different paper and board types.

Property	Specifications
Moisture measurement range	0-15% for most paper types
Basis weight ranges	MX8000-T80: from 30 - 400g/m ² MX8000-T20: from 150 - 1200g/m ²
Accuracy	±0.10% moisture content
Resolution	Better than 0.1% moisture content
Fiber orientation	Measurement is unaffected by fiber orientation
Operational temperature	10° to 40°C
Sample Size	Minimum A4 (210 x 297mm) or US letter (8.5 x 11in)
Sample thickness	Up to 3mm
Display	Back-lit LDC display Tactile keypad with 4 multi-function keys with an intuitive operator interface
Language	English plus all major languages (user selectable)
CE compliance	Compliant with EN61010-1 low-voltage directive and EN50082-2 EMC directive
Dimensions	270mm (W) x 328mm (D) x 108mm (H)
Weight	7.2kg (excluding optional carrying case)
Power supply	Universal input 100-240VAC, 50/60Hz
RF power	Less than 2mW/cm ²
Sealing	IP53 with the lid closed
Connectivity	Communications module providing: RS232 to a printer, USB to a PC, Ethernet to a network or PC
Software	GaugeTools XL™ (NDC proprietary) for calibration and data management
Options	Carrying case

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Document No: P-BR-SENS-MX8000-EN-2018DEC04
Date of Issue: December 2018
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