

# PORTABLE MOISTURE METER

## 53-36-00-0001



### Portable Moisture Meter for the Paper Industry



- ▶ Immediate results
- ▶ Field Selection of up to 11 Calibration Curves Pairs
- ▶ Measures 0 to 15 percent Moisture Range
- ▶ Heavy Gauge Stainless Steel Rollers
- ▶ Double Sealed Precision Bearings
- ▶ Recessed Digital LED Display calibrated directly in percent moisture
- ▶ Internal electrical standard assures calibration accuracy
- ▶ Lead Acid Gel Rechargeable Battery
- ▶ Aluminum enclosure
- ▶ Calibrations programmed in micro-controller
- ▶ Complete with Automatic Battery Charger and Carrying Case

The **Portable Moisture Meter** is a micro-controller based instrument that permits instantaneous nondestructive moisture measurement on all types of paper and paperboard.

For immediate, non-destructive measurement of moisture on moving or stationary rolls, stacks, or reams of paper and paper board. The paper industry has long recognized the need for rapid on-line moisture measurement to assure efficient energy usage and a high yield of good quality paper.

The instrument is built a rugged, portable instrument which truly excels in measurement accuracy. It measures the moisture of a variety of materials by determining its dielectric constant, which is related to its moisture content. Eight readings are taken and the average is displayed as one moisture reading. A new average is taken every half (0.5) second.

### Applications

bleached sulfite board • bonds • corrugating medium • creped wadding • disposable diapers • envelope stock • fiber mat • glassine • hardboard • jute • kraft • liner board • newsprint • nonwovens • paper • paper board • particle board (½" thick) • pulp sheets • roofing paper • sheet plastics (PVC and acrylic) • tissue • tobacco paper • toweling • tube sock • waxed release paper



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*For more information about the Portable Moisture Meter or any of our products, please contact Testing Machines Inc. call: 631-439-5400 or email: [info@testingmachines.com](mailto:info@testingmachines.com)*

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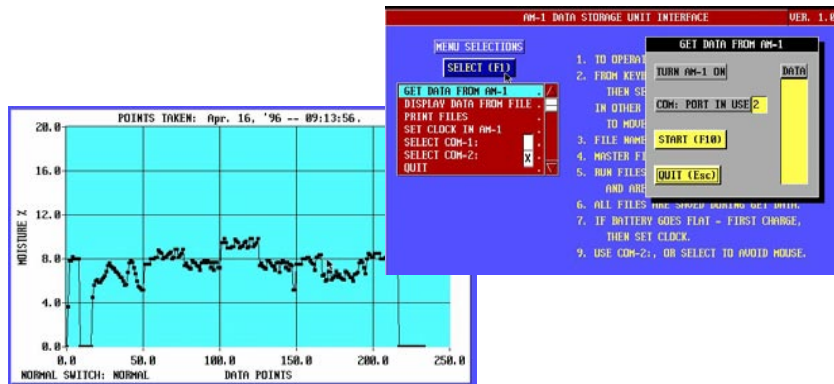
## Test Procedure

The measurement technique employed in the portable moisture meter involves an electronic determination of a basic physical characteristic of the paper, the dielectric constant. This physical property changes with paper moisture, therefore, a calibration can be defined which relates the measured dielectric constant to moisture content. The character of the dielectric response also changes with frequency, hence it is possible to select a frequency and operating mode which minimizes the influence of other variables in the paper such as pH and temperature. The moisture meter employs this principle to achieve a calibration which can be used with good accuracy for all types of paper. To assure highest measurement accuracy, eight readings of moisture content are taken in the machine direction, and the average is displayed as one moisture reading. A new average is taken every half second, providing an easily read display rate.

## Optional Data Storage Unit

Stores 2,000 Moisture Readings · 30 minutes worth of testing

The Data Storage Unit (DSU) is a powerful tool for statistical quality control data when integrated into the Portable Moisture Meter. The DSU incorporates a real-time clock, non-volatile memory and an RS-232 Input/Output link to a computer. When the portable moisture meter is turned on, the DSU records the date, time and Calibration Curve Switch Position that is in use. The moisture readings are then recorded at a rate of one per second and downloaded to a program that saves the measurements as files. The custom "point and click" software then displays the files as graphs. The files can be printed or imported into a spreadsheet program for additional analysis and for future reference.



◀ *Graphs and Data from the Data Storage Unit (optional)*

Model	53-36-00-0001
Range	0 to 15% moisture
Instrument Size	
Weight	4 kg (9 lb)
W x D x H	150 x 150 x 230 mm (6 x 6 x 9 in)
Electrical	Specify voltage requirements when ordering Rechargeable battery; charger included
Data Interface	RS-232 with optional Data Storage Unit

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