

## Experion MX Porosity Measurement



Experion MX will help improve your business performance in today's challenging economic environment. This fully integrated quality control and process knowledge system provides superior visibility into the papermaking process while it simplifies your operational efforts and is easy and cost effective to maintain and service. Improve paper quality, reduce raw material, energy, services and maintenance costs, and increase production efficiency with a package of solutions that provides the lowest total lifecycle cost available.

### Porosity Measurement

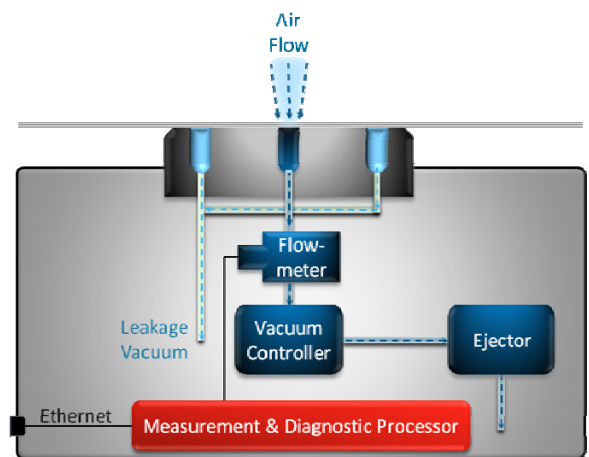
Honeywell's scanning Porosity Measurement provides a unique technology to measure paper porosity, which is an important property for paper that requires air permeability. Porosity Measurement is based on the measurement of airflow, which correlates directly with sheet porosity, and provides reliable, real-time porosity data across a wide measurement range.

Porosity Measurement closely emulates laboratory methods, which ensures good laboratory correlation. The measurement response is linear and not grade dependent, thus minimizing calibration efforts. The resulting measurements can be expressed in one of the following units: Bendtsen, Gurley, Coresta, or Bekk.



### Features and Benefits

- Unique continuous flow measurement method enables fast operation thus enabling high-resolution profile measurement.
- Sensor measuring heads are developed for continuous operation. A sealing zone in the measurement probe minimizes leakage air, which could affect measurement accuracy.
- Self-cleaning cycle, each time the sensor passes the sheet edge, prevents dust buildup.
- Extended measurement range provides a solution for a wide range of porosity critical paper grades, such as cigarette, copier, coating base, sack and fine.
- Excellent correlation with most common porosity measurement standards without need for grade-dependent calibration.
- Reduces the need for laboratory testing.
- Online diagnostic signals feed the embedded preventive maintenance tool.
- Online and real-time porosity measurement.
- Robust construction of sensor ensures trouble-free, continuous operation even in hostile environments.

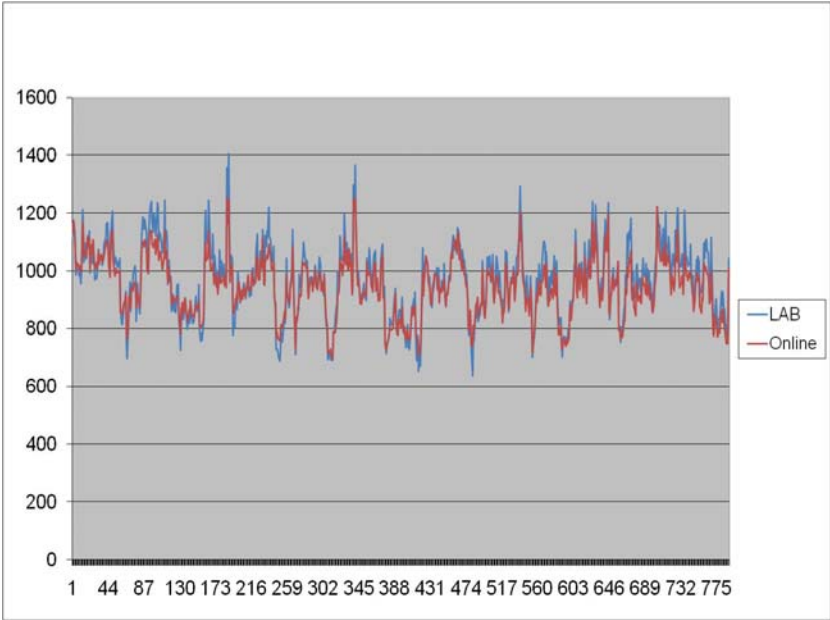


Porosity Measurement operating principle

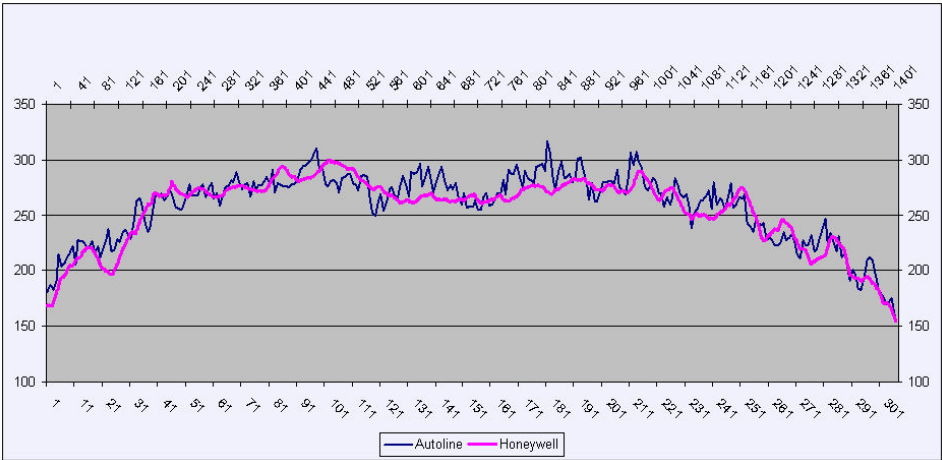
Reliable Measurement

Porosity Measurement ensures measurement accuracy by eliminating the effects of leakage air and dust. The sensor keeps the sheet in good and stable contact with the measuring head by means of a vacuum ring, which prevents air leakage and ensures reliable measurements. The measuring head which is in contact with the sheet surface is coated with a wear-resistant material, and is slightly curved to ensure gentle contact with the sheet.

The air blow function of Porosity Measurement removes accumulated dust from sensor surfaces. When in the off-sheet position a strong air pulse is emitted from the sensor head. The air filters, in turn, prevent dust from entering the sensor.



An example of the good correlation in Bendtsen units between online porosity and laboratory measurement results in a fine paper mill. Sample set is 775 reels.



Profile correlation on coated base.

## Specifications

Range	700 Bendtsen, in between 100 and 1600 Bendtsen
Basis weight range	10 – 200 gsm
Repeatability, 2-sigma	5 (Bendtsen) on a paper sample of $\leq 200$ Bendtsen
Static accuracy, 2-sigma	15 (Bendtsen) on a paper sample of $\leq 200$ Bendtsen
Dynamic correlation, 2-sigma	15 (Bendtsen) or 8% of the reading, whichever is greater
Maximum ambient temperature	Model Q4219-51 93° C Model Q4219-52 70° C
Configuration	Outboard sensor, below the paper sheet

### More Information

To learn more about Honeywell's Experion MX solutions, visit [www.honeywellprocess.com](http://www.honeywellprocess.com) or contact your Honeywell account manager.

### Automation & Control Solutions

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