

AQUATRAN® Model 2

High sensitivity coulometric water
vapor transmission rate test system



NEW
TruSeal™ Technology

Accurately measures water
vapor transmission rates to
 5×10^{-5} g/(m²- day)


mocon®
Test. Measure. Analyze.

AQUATRAN® Model 2

An ultra-high barrier water vapor transmission rate (WVTR) test instrument incorporates MOCON's proprietary AQUATRACE® Gold sensor, an absolute sensor for ultimate accuracy.

The AQUATRAN Model 2 offers:

- Absolute measurement
- **AQUATRACE Gold Sensor**
 - No calibration required
 - Longer sensor life
 - Measures to 5×10^{-5} g/(m² - day)
 - Two test cells per module
 - Flexibility to add satellite modules
 - WinPerm™ Software
- **TruSeal™ Technology**

TruSeal ensures a perfect seal between film and instrument every time by incorporating a nitrogen flush ring at the perimeter of the seal.



AQUATRAN Model 2 systems are certified in accordance with the National Institute of Standards and Technology (N.I.S.T.). Each instrument will be issued a signed Certificate of Compliance and include a set of N.I.S.T. traceable WVTR films.

Eliminate Ambient Air Water Vapor Error

When measuring the permeability of water vapor at the 5×10^{-5} g/(m²-day), seal leaks present a major hurdle owing to moisture in ambient air. Regardless of the method or sensor used, it is imperative to account for only the moisture due to actual permeation, not from an ambient leak.

To ensure the accuracy of the WVTR measurement, MOCON developed TruSeal technology. TruSeal ensures a perfect seal between film and instrument – every time, by incorporating a nitrogen flush ring at the perimeter of the cell. During a test cycle, nitrogen flushes around the ring and eliminates the possibility of ambient water vapor entering the test area through or under the seal.

AQUATRACE Gold Sensor

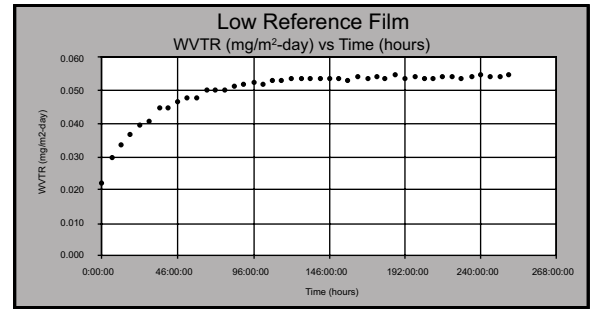
This sensor is a unique coulometric phosphorous pentoxide sensor that is absolute and follows Faraday's Law. One hundred percent of all water vapor entering this sensor is directly converted to a measurable amount of charge.

This sensor also incorporates MOCON's proprietary technology which allows this sensor to be one hundred percent efficient and have a longer life than conventional phosphorous pentoxide sensor technology



For ultra-high barrier films where accuracy and extreme sensitivity are necessary.

AQUATRAN Model 2 is ideally suited for developers, manufacturers and converters of ultra-high barrier films, as well as packagers using ultra-high barrier films to help extend product shelf life.



Actual data from test performed on AQUATRAN Model 2 low reference film.

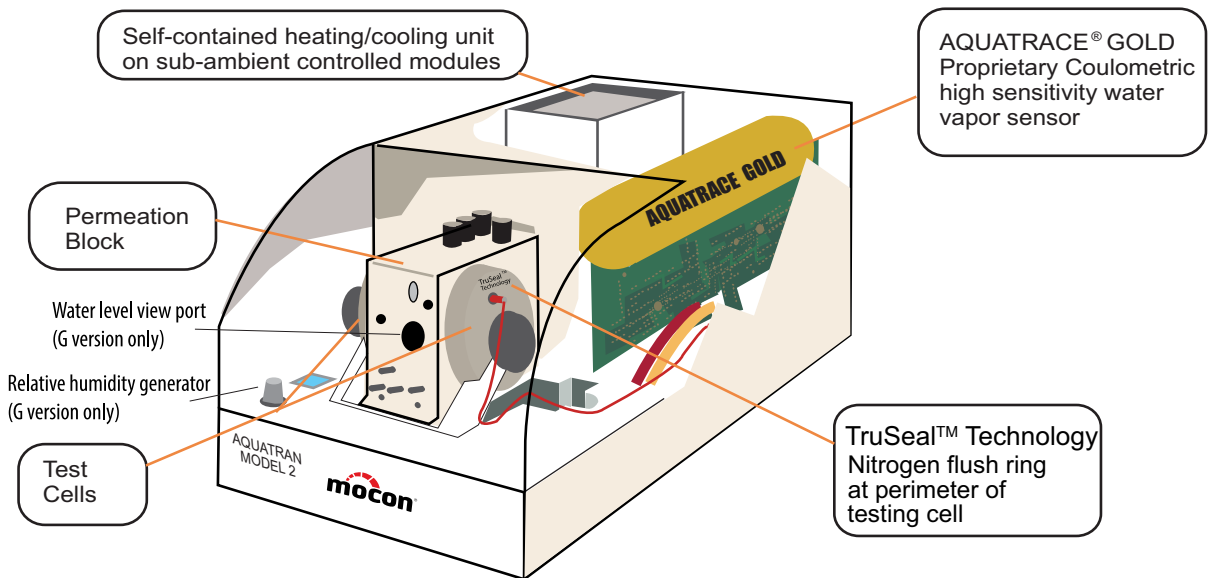
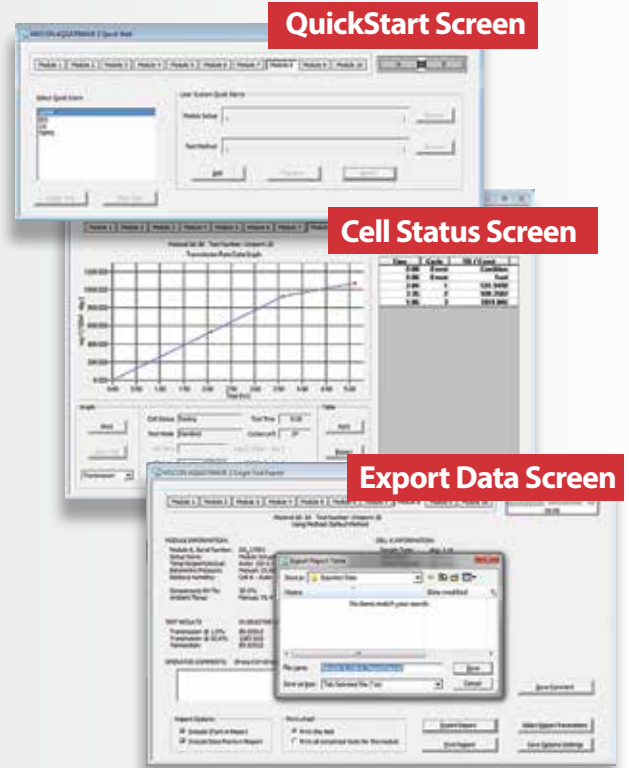
WinPerm™ software further speeds analysis, assures accuracy and incorporates more data handling capabilities

The WinPerm Permeability Software controls up to 20 test cells in a system and simplifies the tasks of setting up and conducting tests.

Pre-programmed test and module formats as well as intuitive set-up, control and results screens make it easy to generate and interpret test data.

WinPerm Features:

- Quickstart for fast test initiation using standard or user defined test conditions
- Automatic conversion of test data to Excel® format
- Ability to print detailed single test results or summary report of all tests performed on a module



Specifications AQUATRAN® Model 2 Water Vapor Transmission Rate Test System

G Model

WVTR Range

$5 \times 10^{-5} \text{ g}/(\text{m}^2 \cdot \text{day})$ to $5 \text{ g}/(\text{m}^2 \cdot \text{day})$

Sensor

AQUATRACE® Gold

Test Temperature Range

Films - 10 - 40 C

Packages - ambient or 10 - 40 C with optional package environmental chamber

RH

Films - 35 - 90, 100%

Packages - 100% RH

Test Sample Sizes

Films - 50 cm^2

Packages - up to 3 liters per package

Test Cells

Two - 50 cm^2 Test Cells per Module

Expandable up to 10 modules

Electrical Specifications

Voltages: 100, 120, 220 or 240 VAC $\pm 10\%$

Frequencies: 50/60 Hz

W Model

WVTR Range

$5 \times 10^{-5} \text{ g}/(\text{m}^2 \cdot \text{day})$ to $5 \text{ g}/(\text{m}^2 \cdot \text{day})$

Sensor

AQUATRACE® Gold

Test Temperature Range

10 - 50 C

RH

Films - 100% RH

Packages - 100% RH

Test Sample Sizes

Films - 50 cm^2

Packages - up to 3 liters per package

Test Cells

Two - 50 cm^2 Test Cells per Module

Expandable up to 10 modules

Electrical Specifications

Voltages: 100, 120, 220 or 240 VAC $\pm 10\%$

Frequencies: 50/60 Hz

N.I.S.T. Traceability

MOCON instruments are manufactured traceable to N.I.S.T. (National Institute of Standards and Technology) and come with a set of N.I.S.T. Traceable films. These films confirm that the AQUATRAN system is operating to optimum performance assuring greater precision and accuracy of test data.

MOCON Commitment

The new system is another example of MOCON's 40 year commitment to innovation and quality in the design of permeation testing systems for barrier material and package assessment.

Technical Support & Service

MOCON maintains an applications and testing laboratory to assist customers in realizing the full potential for their MOCON instrument. Seminars and intensive training classes are held for those interested in maximizing their understanding of the systems, technology, and operating procedures. Call your MOCON representative for more information on these programs or for your system quotation.



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