



mocon®



NEW

# PERMATRAN-W® Model 700

## WVTR Transmission Rate Test System

- Test up to seven films or packages in any combination simultaneously.
- Software so responsive that your concept of WVTR testing will immediately change!



Validation Services  
Now Available



Only MOCON systems comply  
with the following standards:

ASTM F-1249

TAPPI T557

JIS K-7129

Made in USA

**mocon®**

Over 35 Years of  
Permeation Experience

**The PERMATRAN-W<sup>®</sup> Model 700 WVTR system incorporates MOCN's most advanced detection sensor, 7 independently operated test cells, direct 100% relative humidity testing with compensation to alternative RH values, electronic flow control and enhanced Windows<sup>®</sup>-based software.**



The PERMATRAN-W Model 700 is the latest innovation in Water Vapor Transmission Rate (WVTR) testing, incorporating the finest in technology while setting a new standard for accuracy, throughput and ease of use.

The simple design is ideal for quality control as well as research and development, the PERMATRAN-W Model 700 incorporates a handy QuickStart feature allowing an operator to begin testing with only four clicks of the mouse! Security features to protect critical test set-ups and control multiple-user situations are standard.

The Model 700 complies with ASTM F-1249 and Tappi T-557, is certified traceable to NIST and is CFR21 Part 11 compliant. These plus optional validation services, certification services, service contracts and use of only the highest quality components ensure you will meet all regulatory requirements and that you can trust the results on which your critical business decisions are made.

### **Unique Cell Design**

The advanced pneumatic push-button test cells are designed to accommodate standard 50 cm<sup>2</sup> samples. The removable cell structures allow for easy sample preparation while the design includes improved surface finish and Ni-chrome plating for durability. With seven independently controlled test cells included, it is possible to run three sets of duplicate samples allowing for one user provided reference material.

### **PERMATRAN-W Model 700 Features:**

- 7-50cm<sup>2</sup>, horizontally mounted, pneumatically controlled and removable test cells, similar to the PERMATRAN-W Model 600.
- Testing at 100% relative humidity driving force with computer factored results at other relative humidities
- High sensitivity MOCN infrared water vapor sensor with improved response time
- Comprehensive and "operator friendly" Windows 2000 based software interface
- Automatic electronic flow control
- Film and package testing in any combination
- Easy sample preparation



***"Destined to become another industry workhorse like the PERMATRAN-W 600 before it, the Model 700 provides more testing capability with a huge advancement in software control and data capturing power..."***



**The Model 700 software is absolutely state-of-the-art combining the best in operator friendliness, flexibility in test design and new testing features useful for data analysis.**

The Model 700 incorporates automatic flow control set from the keyboard...

The system has the ability to directly test at 100% RH and compensate results to any other RH value

CFR 21 Part 11 compliant – this optional feature requires operators to log in, (🔒 indicates locked) using their personal password, to operate the system (🔓 indicates unlocked). A record keeps track of users and all information related to testing performed.

With 7 independently operated cells, test 3 sets of duplicates and designate 1 cell for a user provided reference

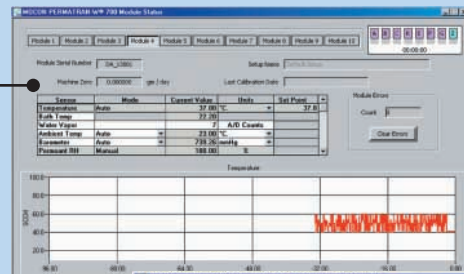
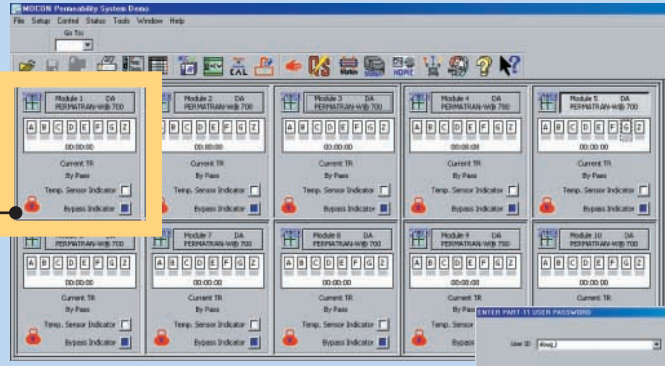
Module status screen allows for monitoring of the temperature, infrared, barometric and relative humidity sensors before, during and after testing

Detailed individual test reports as well as summary module test reports capture not only test results but also comprehensive test and module set-up information.

Sensor	Mode	Default Value	Units	Set Point
Flow Rate A	Auto		SCCM	50.0
Flow Rate B	Auto		SCCM	50.0
Flow Rate C	Auto		SCCM	50.0
Flow Rate D	Auto		SCCM	50.0

Permeant RH Compensation

Compensate to:  %



MDCON PERMATRAN v700 Single Test Report

Material ID: <unspecified> Test Number: <unspecified>  
Using Method: Default Method, Calibrated: 02/14/2002 01:26:47 PM

Module Information	Cell D' Information
Module 3, Serial Number: DA_12001	Sample Type: Film: 50 cm <sup>2</sup> , 1 mil
Setup Name: Default Setup	Test Mode: Convergence By Cycles
Temp Setpoint/Actual: Auto: 37.0 / 37.4 °C	Control Param: Min 2 Cycles
Barometric Pressure: Auto: 740.7 mmHg	Exam Minutes: 10
Relative Humidity: Parametric: Manual: 100.0%	Individual Zero: No Ind. Zero
Flow Rate: Auto: 55.60	Conditioning: Disabled
	Ambient Temp: Auto: 23.0 °C

Test Information

Current Status: Test Done 05/24/2002 02:15:35 PM

Started Testing:

Transmission @ 100.0%: 53.87546 gm / [ m<sup>2</sup> · day ]

Transmission @ 90.0%: 52.90791 gm / [ m<sup>2</sup> · day ]

Permeation: 53.87546 mil · gm / [ m<sup>2</sup> · day ]

Operator Comments: (Press Ctrl+Enter to start a new line)

1 mil Taylor, lot A1

## Cell Features

- Cell clamping is pneumatic with pushbutton actuation
- Cell resistance heating is standard. Provision is made for an optional computer controlled external bath for sub ambient operation
- Flow control to each cell is electronically set via the keyboard
- Cells are designed to accommodate blister packs for use in the pharmaceutical industry



# PERMATRAN-W<sup>®</sup> Model 700

**WVTR Transmission Rate  
Test System**



## Product Information

**WVTR Test Range:** (See Note 1)

**Test Temperature Range:**

5C above ambient to 50C (standard)

5C to 50C (with optional computer controlled external bath)

**Standard RH Testing (No salts required):**

Films and packages-100% RH

Computer compensated results-1% to 99% RH (fickian materials only)

**Test Sample Size:**

Films: 4.25 in. x4.25 in. (10.8 cm x 10.8 cm)

Packages: Up to 3 liters per package

**Number of Test Cells:** Seven-50cm<sup>2</sup>

**Expandable up to 10 modules** (70 test cells)

**Built-in Reference Cell** (Standard), **Selectable Zero Compensation** (Standard)

**Automatic Flow Control and Compensation** (Standard)

**Automatic Temperature Control** (Standard)

**Computer, Monitor, Printer and WinPerm Permeability Software** (Standard)

This instrument is ETL listed, Conforms UL Standard 1262, is Certified to CAN/CSA C22.2 No. 151, and Complies with CE Product Safety, Electromagnetic Emission & Susceptibility

**Also Available:**  
PERM-NET 2000 software for connecting multiple systems, further data analysis, and laboratory control.

Note #1

Carrier Flow	Sample	g/m <sup>2</sup> /day	g/100 in <sup>2</sup> /day	g/pkg/day
100 cc/min	Unmasked	0.035 to 100	0.0023 to 6.45	0.00018 to 0.5
	Masked	0.35 to 1000	0.023 to 64.5	—
10 cc/min	Unmasked	0.005 to 10	0.0003 to 0.65	0.00003 to 0.05
	Masked	0.05 to 100	0.003 to 6.5	—

### NIST Traceability

MOCON instruments are manufactured traceable to NIST (National Institute of Standards and Technology) and come with a set of two NIST Traceable Calibration films. These films allow for calibration in the range of desired testing assuring greater precision and accuracy of test data.

### MOCON Commitment

This new system is another example of MOCON's 35 year commitment to innovation and quality in the design of permeation testing systems for barrier material and package assessment.

### Consulting & Testing Services

MOCON maintains an applications and testing laboratory to assist customers in realizing the full potential of 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 a system quotation.

**mocon<sup>®</sup>**

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MOCON reserves the right to change specifications without notice as part of our continuous program of product improvement.

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