

OX-TRAN® MODEL 1/50 PERMATRAN-W® MODEL 1/50 OXYGEN AND WATER VAPOR TRANSMISSION RATE TESTING SYSTEMS



OX-TRAN® Model 1/50

Some of the features are:

- RH is maintained automatically without need of operator adjustment
- Automatic flow removes the need to adjust flow by the operator
- Easy test set-up via the built-in keypad
- Quick Start, speeds throughput by reducing test setup times
- Simple step-by-step calibration and status screens
- Software that minimizes operator error
- Test results can be downloaded and archived

Designed for low cost barrier testing, the 1/50 series of instruments provide MOCON® accuracy for Water Vapor Transmission Rate testing (WVTR) or Oxygen Transmission Rate testing (OTR).

Designed for both the first time user and the advanced operator, these instruments:

- Are cost effective QA tools
- Stand alone requiring no computer to operate
- Have a built-in display which allows visible feedback during operation
- Allows quick and automatic RH generation

Advanced users can enter individual test parameters via the keypad. These users can then run the test and/or save it as either a method or Quick Start for use by other operators, reducing the need for fully trained operators.

These instruments are robustly built for a lifetime of dependable daily use. Ideal for food and beverage, pharmaceutical, medical device, electronic applications and building materials. Film converters find these systems particularly cost effective.

PERMATRAN-W® Model 1/50



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DATA SHEET

PERMATRAN-W Model 1/50 Water Vapor Transmission Rate

Available in G or W models	
WVTR Range (50 cm ² , 37.8°C)	0.1-100 gm/(m ² · day)
WVTR Range (5 cm ² , 37.8°C)	1.0-1000 gm/(m ² · day)
WVTR Repeatability (50 cm ²)	±0.05 gm/(m ² · day) absolute or ± 3 % relative (whichever is greater)
Test Method	Accumulation
Film Area	50 cm ²
Dry Side RH Probe Range	5-50% RH on Carrier
Test Gas RH	35-90% RH and 100% RH (G model) and 100% RH only (W model)
Driving force gradient range	30-95% RH
Temperature Range	10-40 C (G model) and 5-50 C (W model)
Gas Requirement	Dry Air or Dry Nitrogen
Memory	
Product Memory Capacity	99 methods
Compliance	CE/CSA/UL
Barometer	600–800 mmHg
Cell Clamping	Pneumatic

Standards: ASTM E-398; TAPPI 523; ISO 15106-1

OX-TRAN Model 1/50 Oxygen Transmission Rate

OTR Range (50 cm ²)	0.1-200 cc/(m ² · day)
OTR Range (5 cm ²)	1.0-2000 cc/(m ² · day)
OTR Repeatability (50 cm ²)	±0.05 cc/(m ² · day) absolute or ± 2 % relative (whichever is greater)
Test Method	Coulometric (sensor in cell)
Film Area	50 cm ²
RH	Dry, 5 - 90% RH
RH Probe Accuracy	± 3%
Carrier Gas Requirement	99.9% Dry Nitrogen (or better)
Test Gas Requirement	Dry Air or 100% Dry O ₂
Gas Pressure Range	30–35 psig
Temperature Requirement	10–40 C
Memory	
Product Memory Capacity	99 methods
Compliance	CE/CSA/UL
Barometer	Automatic Pressure Correction 600-800 mmHg
Cell Clamping	Pneumatic

Standards: ASTM D-3985; ASTM F-1927; JIS K-7126-B; DIN 53380-3; ISO 15105-2

Coulometric sensor: For over 45 years the OX-TRAN line of instruments have been the industry standard for OTR testing. Using a coulometric sensor, the OX-TRAN family is the basis for the ASTM standard D-3985. The coulometric sensor is an intrinsic or absolute sensor which follows Faraday's law, therefore requiring no calibration. N.I.S.T. films are available to ensure the entire system is performing to the highest MOCON standards in precision and accuracy.

Features:

- **Low cost**
- **Automatic RH controls**
 - Frequency modulated
 - Fast RH controls
- **Simple to use – Easy to Install**
 - Effortless installation by user
 - Practical built-in software minimizes operator error
 - Advisory screen prompts operator input
 - Safety systems prevent sensor damage
 - No flow adjustment required
 - Customize and store up to 99 test methods
 - System protects against over or under pressure
 - System protects against thermal runaway
- **Easy to read screen**
 - Four status screens display real-time information
 - Four intuitive configuration screens
 - Step-by-step calibration screens
- **Horizontal test cell**
 - Lift out cell for easy film placement
 - Convenient film mounting
 - Pneumatic clamp for consistent clamping force
 - Additional cells available for pretest preparation
- **Stand alone**
 - Small footprint (11.5" x 15") (29cm x 38cm)
 - The OX-TRAN Model 1/50 uses a patented coulometric sensor method that requires no calibration

