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

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

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.
Low cost permeation systems for WVTR or OTR

Features:

- Low cost
- Automatic RH controls
  - Frequency modulated
  - Fast RH controls
- Simple to use - Easy to Install
  - Effortless installation by user
  - 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

Other screen options include:

- Results
- Tools
- Settings
- Method
- Calibrate
### MOCON® Commitment

These analytical instruments are another example of MOCON’s long-standing commitment to innovation and quality in the support of our customers.

### Technical Support & Service

MOCON offers a variety of technical services designed to provide you with first class support. Whether you require technical support, next-day spare parts delivery, on-site training, N.I.S.T. certification or “turn-key” validation, our staff can tailor a service program to fit your needs. Our goal is to provide the best in product support services.

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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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### PERMATRAN-W Model 1/50 Water Vapor Transmission Rate

| WVTR Range (50cm², 37.8°C) | 0.1-100 gm/(m² • day) |
| WVTR Range (5cm², 37.8°C) | 1.0-1000 gm/(m² • day) |
| WVTR Repeatability (50cm²) | ±0.05 gm/(m² • day) absolute or ±3% relative (whichever is greater) |
| Test Method | Accumulation |
| Film Area | 50 cm² |
| Dry Side RH Probe Range | 5-50% RH on Carrier |
| Test Gas RH | 35-90% 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 |

### OX-TRAN Model 1/50 Oxygen Transmission Rate

| OTR Range (50cm²) | 0.1-100 cc/(m² • day) |
| OTR Range (5cm²) | 1.0-2000 cc/(m² • day) |
| OTR Repeatability (50cm²) | ±0.05 cc/(m² • day) absolute or ±2% relative (whichever is greater) |
| Test Method | Coulometric (sensor in cell) |
| Film Area | 50 cm² |
| 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 O₂ |
| Gas Pressure Range | 30-35 psig |
| Temperature Requirement | 10-40°C |

### Standards:

- ASTM E398
- TAPPI 523
- ISO 15106-1
- JIS K 7129

### 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.