

## OX-TRAN® Model 2/21 10x Module

Ten times the sensitivity of the OX-TRAN Model 2/21 L Module.  
Only MOCONs instruments comply with ASTM D-3985

An ultra-high barrier oxygen transmission rate (OTR) test instrument incorporating MOCON's newest proprietary Coulox® sensor. An industry exclusive sensor for ultimate accuracy.

### Features and Benefits

- Absolute measurement
- O<sub>2</sub>TR Test Range 1 Coulox sensor
- No calibration required
- Long sensor life
- Measures to 0.0005 cc/(m<sup>2</sup> · d)
- Two test cells per module
- Master connects to all other 2/21 satellites
- Satellite connects to all OX-TRAN masters
- WinPerm™ Software
- TruSeal™
- Available as Master or Satellite
- US Patent No. 7,429,027. Other US patents pending.



### For high barrier films and packages where accuracy and extreme sensitivity are required.

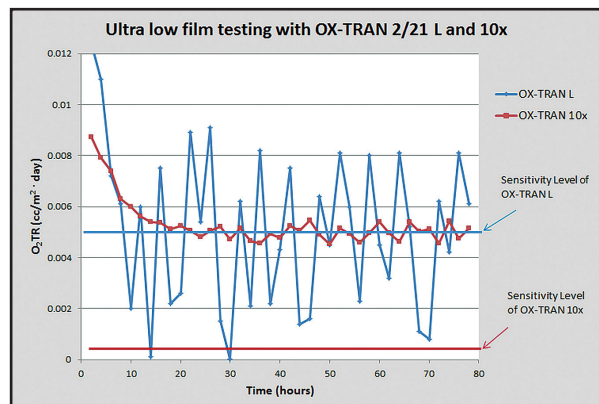
The OX-TRAN Model 2/21 10x module is ideal for applications which require increasingly better oxygen barriers. Film and resin manufacturers, converters and packagers in industries such as food, pharmaceutical, medical device and electronics will benefit from the 10x modules greater sensitivity for measuring ultra-oxygen barrier characteristics for films and packages.

In order to achieve ten times greater sensitivity with the new OX-TRAN Model 2/21 10x modules, MOCON'S engineers incorporated four major improvements to the system:

- Development of the new O<sub>2</sub>TR Test Range 1 level Coulox sensor
- Improved electronics throughout to reduce system "noise" level
- New TruSeal film cell design to eliminate any edge-leakage and assure a perfect seal everytime
- Improve temperature stability

The OX-TRAN Model 2/21 10x module measures barrier films and packages accurately and repeatably down to  $5 \times 10^{-4}$  cc/(m<sup>2</sup> · day) at precise temperature and relative humidity conditions. The 10x is also well suited for those who are currently measuring at the lower end of the useable range of the OX-TRAN Model 2/21 L module (0.005 cc/(m<sup>2</sup> · day) (see graph). Design enhancements in the 10x allow for increased accuracy and repeatability for barriers in this range of measurement.

For over 40 years, the OX-TRAN line of OTR transmission rate test systems has been the standard for OTR testing. Using a patented coulometric sensor, the OX-TRAN family is the basis for ASTM standard D-3985. The proprietary Coulox brand 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.



Graph depicting the relative stability of the 10x vs. the L modules at 0.005 cc/(m<sup>2</sup> · day).

## Specifications

### Modules

Master M10x  
Satellite S10x

### Sensor:

O<sub>2</sub>TR Test Range 1 Coulox Sensor

### Temperature Range:

10 C to 40 C

### Standard Testing:

Films - Dry or Ambient  
Packages - Dry or Ambient

### Controlled RH Testing:

Films - 0% and 35% to 90% RH  $\pm$  3%  
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### Test Sample Size:

Films 4.25 in x 4.25 in (10.8 cm x 10.8 cm)  
Packages - Up to 3 liters per package

### Additional Features

Controlled RH - Up to 2 liters per package  
RH Plus easy RH Control  
Test Cells per Module - 50 cm<sup>2</sup> Test Cells  
Expandable up to 10 modules (20 test cells)  
Computer, Monitor, Printer and WinPerm™ Software  
Automatic Temperature Monitor & Control  
Barometric Pressure Compensator (optional)

### O<sub>2</sub>TR Test Range 1:

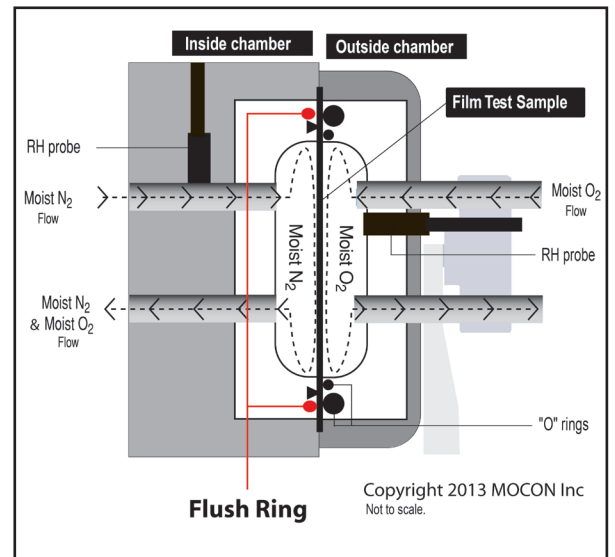
	cc/(m <sup>2</sup> • d)	cc/(100 in <sup>2</sup> • d)	cc/(pkg • d)
Unmasked:	0.0005 to 200	0.00003 to 13	0.0000025 to 10
Masked:	0.005 to 2,000	0.0003 to 130	N/A

## Standards

### Standards:

ASTM D-3985 Films  
ASTM F-1927 Films  
DIN 53380 Films  
JIS K-7126 Films  
ASTM F-1307 packages  
ISO CD 15105-2  
CFR21 Part 11 compliant  
Validation service available

### TruSeal™ Cell



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



Equipos de control  
de calidad

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### 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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