



# **OX-TRAN<sup>®</sup> 2/12 SERIES** **OXYGEN PERMEATION ANALYZER**

Wide Range OTR Testing for Barrier Films & Packages

**AMETEK<sup>®</sup>**

**mocon<sup>®</sup>**

## OTR Barrier Measurements... Done Right.



*Interchangeable cartridge options such as package adapter, edge effect and reduced area cartridges expand testing capabilities*



### Removable Cartridges

- Easy sample prep on the benchtop
- One button release and loading
- Pneumatic clamping provides more repeatable results
- Interchangeable cartridge options

## Versatility

### Wide Range Oxygen Permeation Analyzer

The OX-TRAN 2/12 series Oxygen Transmission Rate (OTR) analyzers offer a wide range of detection for testing low-to-high level barriers or high transmitter films. These analyzers are a lower cost option for reliable OTR analysis. They feature two independent cells with changeable horizontal test cartridges that allow a wide variety of sample sizes and types to be easily and accurately tested.

### Models:

#### R MODEL

- Low-to-high barriers
- Widest range OTR analyzer
- Detection range from 0.05 to 28,800 cc/(m<sup>2</sup> · day) (up to 255,300 cc/(m<sup>2</sup> · day) with reduced area cartridge).
- 2/12 R model has wide range sensor providing reliable, repeatable results

#### T MODEL

- High transmitters
- Designed for barriers beyond the operating range of traditional OTR instruments
- Detection range from 200 to 65,000 cc/(m<sup>2</sup> · day) (up to 576,200 cc/(m<sup>2</sup> · day) with reduced area cartridge).
- 2/12 T model has a unique high range Coulox sensor for high transmitter barriers

### Wide Range of Applications

The OX-TRAN 2/12 Series of instruments are available with a variety of AMETEK MOCON's exclusive test cartridges, providing flexibility to test more sample types. These include whole packages, paper-based materials and lower barrier films with the reduced area cartridge that increases the maximum range without the need for masks.

### TruSeal®

- Gas flush of sample mounting seal protects chamber integrity
- Lowers background level reducing need to run individual zero
- Shortened testing time increases throughput
- More repeatable results

### Control Features

- Fully automated flow, temp, & RH control throughout tests
- Automatic test method development and recommendations
- Programmable multi-test sequencing
- Temperature compensation mode for refrigerated applications

# SIMPLIFIED RESULTS

## Advanced Control System

The user friendly WinPerm 2 control system features fully automated testing including temperature, gas flow and RH control. Final test reports are automatically saved and can be set to automatically print and export to permanent storage directories. The analyzer is compatible with PermWare™, your complete permeation laboratory data management system. The test mode options make testing known or unknown samples easy and repeatable. A single button push initiates a fully automated test following pre-set stored parameters, reducing operator variability. The intuitive color touch screen is easy to learn and use while the automated testing provides consistent results and fewer potential errors.

*Auto-Test mode automatically adjusts the testing parameters to take the guess work out of determining parameters*



*Advanced-Test mode is the most commonly used, where the user specifies the parameters and conditions to perform the test*



## Accuracy in Oxygen Permeation Testing

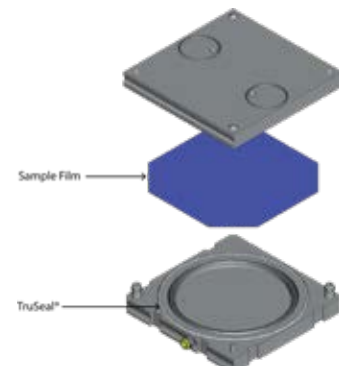
The OX-TRAN 2/12 series analyzers feature our exclusive test cell drawer design with two horizontal removable easy-to-load cartridge to improve test repeatability. A single button opens and closes the drawers, and the cartridge is automatically clamped in place with consistent and even force on any sample thickness. This approach provides greater test repeatability than manual or cam clamping methods. All test cartridges incorporate AMETEK MOCON's exclusive TruSeal® design that utilizes two seals and flushes gas between them to prevent ambient ingress into the test area. This reduces background levels, improves repeatability, and reduces the need to run individual zero.

*Sequential testing allows a series of tests to be performed on the same samples at different test conditions*



Sequential Test Parameters			
Parameter Values			
#	Temperature	Test Gas RH	Carrier Gas RH
1	23.0 °C	0.0 %RH	0.0 %RH
2	25.0 °C	5.0 %RH	60.0 %RH
3	33.0 °C	90.0 %RH	80.0 %RH
4	38.0 °C	60.0 %RH	90.0 %RH

*Removable cartridge utilizes central pneumatic clamp and TruSeal to provide repeatable results*



## Touchscreen Interface

- Intuitive automated operation requires less training
- Built in multi-level user management and data security
- Event log & trouble shooting guide
- Save on valuable lab space by eliminating need for PC

## Accurate Sensors

- 2/12 R model has wide range sensor providing reliable, repeatable results
- 2/12 T model has a unique high range Coulox sensor for high transmitter barriers
- Built-in sensor protection

## Warranty

- Full 100% parts and workmanship warranty for 12 months

# OX-TRAN 2/12 SERIES SPECIFICATIONS

## Industry Standards

- ASTM F2622-08
- ISO CD 15105-2
- JIS K-7126-B
- DIN 53380-3

## Conformance Standards

- CE, UL, CSA Safety Compliance

## Performance Specifications

	2/12 R	2/12 T
Test Temperature Range	10° to 40° C ± 0.2° C	10° to 35° C ± 0.2° C
Controlled RH Testing Ranges	0%, 5 to 90% ± 3%	0%
Maximum Film Thickness	Up to 120 Mil	
Carrier Gas	100% Nitrogen	
Test Gas	100% Oxygen (Purity 99.9%)	

## Connectivity

- Ethernet Port
- 2 USB Ports
- PERM-NET Lite™ for remote monitoring

## Dimensions & Weight

Depth: 23" or 58,0 cm

Width: 12" or 30,4 cm

Height: 15.5" or 39,4 cm

Weight: 95 lbs. or 43,1 kg

## Accessories

- Reduced area cartridge
- Edge effect cartridge
- Custom engineered test cartridges
- Package testing adapter
- PermWare™ software for data collection and remote monitoring

## Technical Specifications

Models	Test Ranges			Resolution	Repeatability	
	cc/(m <sup>2</sup> · day)	cc/(100 in <sup>2</sup> · day)	cc/(pkg · day)	cc/(m <sup>2</sup> · day)	cc/(m <sup>2</sup> · day)	
2/12 R	Normal (50 cm <sup>2</sup> )	0.05 to 28,800	0.003 to 1858	0.00025 to 144	0.05	0.05 or 1.5%*
	Reduced Area Cartridge (5.64 cm <sup>2</sup> )	0.44 to 255,300	0.027 to 16,470	-	-	-
2/12 T	Normal (50 cm <sup>2</sup> )	200 to 65,000	12.9 to 4200	1.0 to 323	2.0	25 or 1%*
	Reduced Area Cartridge (5.64 cm <sup>2</sup> )	1770 to 576,200	114 to 37,200	-	-	-

\* Whichever is greater