



OX-TRAN[®] MODEL 2/28 SERIES OXYGEN PERMEATION ANALYZER



High throughput oxygen transmission testing for barrier films.



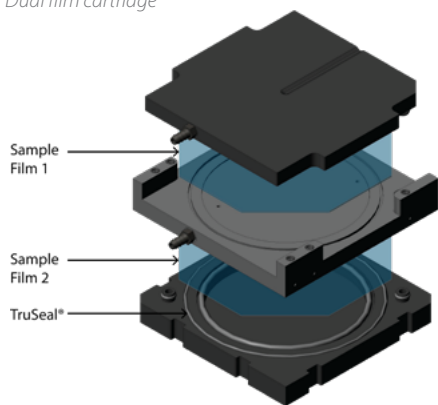
High Throughput Oxygen Permeation Analyzer

The OX-TRAN 2/28 Series of permeation analyzers is designed for laboratories that routinely perform a high quantity of oxygen transmission rate (OTR) tests. With a unique four-cell capability, instruments in this series can test four barrier samples simultaneously, providing twice the throughput of traditional OTR instruments.

Two models are available within the 2/28 series: the 2/28 H and the 2/28 HR. The 2/28 H was designed for dry testing conditions, with an RH of 0%. The 2/28 HR model includes precise control of RH for the test gas, allowing you to more closely match environmental conditions or previous testing data.

Both models share ease-of-use and automated testing features, including software additions to improve laboratory efficiency. The **QC test mode** simplifies routine testing for operators, while the **conditioning test mode** decreases overall testing time. These unique settings can dramatically increase the efficiency and overall testing capacity of your lab, making it the perfect solution for the busy QC lab supporting production operations.

Dual film cartridge



Additional cartridge options



2-cell Remote Testing Adapter



Models	Detection Range cc/(m ² · day)	Test Gas RH	Carrier Gas RH
2/28 H	0.05 to 200	0% (Dry)	0% (Dry)
2/28 HR	0.05 to 200	0%, or 50 to 90%	0% (Dry)

Designed for Efficiency

The 2/28 Series features an innovative dual film cartridge, which combines two test cells into a single cartridge. This allows for more than double the testing capacity of legacy and single-cell models, with the exact same compact footprint.

Dual film cartridges use a standard 50 cm² testing area, and incorporate our proprietary TruSeal® in both the upper and lower cells. The TruSeal design uses two seals and flushes gas between them to prevent ingress into the testing area. This reduces background levels, improves repeatability, and reduces the need to run individual zero.

Interchangeable cartridge options such as the dual cell edge effect and reduced area cartridges expand testing capabilities. With the 2-cell remote testing adaptor you can also test films in environmental chambers or packages.

High Throughput

- Four test cells in one instrument
- Removable horizontal film cartridges
- Short exam times

Low Cost

- Lower maintenance cost per cell
- COULOX® sensor provides longer life than other coulometric sensors

COULOX® Sensor Technology

Using a patented coulometric sensor, the COULOX Sensor provides the most precise and repeatable oxygen permeation data available on the market today. It is the basis for the ASTM standard D3985, requires no calibration, and is the only sensor proven to meet its precision and bias requirements through independent third-party testing.

User Friendly Auto-Testing

The **QC test mode** provides operators the real time status of each test by displaying the target and failure limits while tests are being run. Test methods for commonly performed tests can be set up and stored by an administrator. With a simple touch of a button, operators can recall and start test methods in seconds. Final test reports clearly display the results of the test as Green (Pass), Yellow (Warning) or Red (Fail), eliminating the need to look up the target values and meaning for each test performed.

The **conditioning test mode** option allows phasing of tests by prioritizing the examinations on samples as they approach convergence while other samples are being conditioned. This provides results in less time than normal sampling mode, increasing the throughput of the analyzer.

The Industry's Standard in OTR Testing

The OX-TRAN 2/28 Series is designed for quality control laboratories where abbreviated OTR testing is performed. Due to the simplified operation, these models are best suited for routine testing at set conditions. Whether you need to conform to triplicate standards, or just want to make sure you have consistent results, the OX-TRAN 2/28 Series can meet your needs.

Easy to Use

- Start tests with a single button
- Test result shows Pass, Fail or Warning
- Easily see real-time test status vs target

Next Generation Features

- Fully automated exams
- Interchangeable test cartridges
- Automatic sensor protection



COULOX Sensor

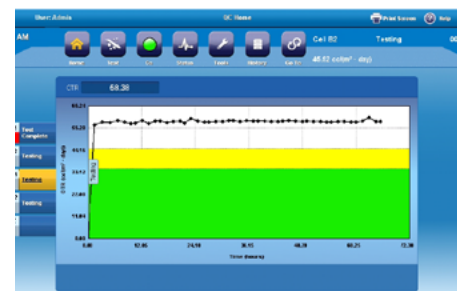
QC test mode allows upper and lower warning and failure limits to be set for stored test methods.



QC test mode graphically displays exam results within the target limits in real time.



QC test mode displaying exam results above target limits



Warranty

- Full 100% parts and workmanship warranty for 12 months
- Exclusive 4-year warranty on the COULOX sensor

OX-TRAN 2/28 SERIES SPECIFICATIONS

Industry Standards

- ASTM D3985
- ASTM F2622
- ISO CD 15105-2
- JIS K-7126-2
- DIN 53380-3
- GB/T 19789-2005

Conformance Standards

- CE, UL, CSA Safety Compliance

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

- PermWare® software is available to collect and manage test data
- Additional cartridges allow samples to be prepared and staged for a quick change out to increase efficiency
- Interchangeable dual-cell cartridge options expand testing capabilities. Options include:
 - Reduced area cartridge
 - Edge effect cartridge
 - Remote testing adapter

Performance Specifications

Specification	OX-TRAN 2/28 H	OX-TRAN 2/28 HR
Test Temperature Range	20°C to 60°C ± 0.2°C	20°C to 40°C ± 0.2°C
Controlled RH Testing Ranges	0% only	0%, or 50 to 90% Test Gas ± 5% RH, 0% Carrier Gas
Maximum Film Thickness - Standard cartridge for 50 cm ² sample - Optional cartridge for 5.0 cm ² sample - Optional cartridge for 10.0 cm ² sample	- Up to 20 mil, 0.5 mm - Up to 120 mil, 3.0 mm - Up to 120 mil, 3.0 mm	- Up to 20 mil, 0.5 mm - Up to 120 mil, 3.0 mm - Up to 120 mil, 3.0 mm
Carrier Gas	Nitrogen/Hydrogen Mix (98%/2%)	Nitrogen/Hydrogen Mix (98%/2%)
Test Gas	100% Oxygen (99.9% pure)	100% Oxygen (99.9% pure)

Technical Specifications

Models		Test Ranges			Resolution	Repeatability
		cc/(m ² • day)	cc/(100 in ² • day)	cc/(pkg • day)	cc/(m ² • day)	cc/(m ² • day)
2/28 Series	Normal (50 cm ²)	0.05 to 200	0.003 to 12.9	0.00025 to 1.0	0.0001	0.02 or 1%*
	Reduced area cartridge or Masked (5.0 cm ²)	0.5 to 2000	0.03 to 129	-	-	-