PERMATRAN-W® MODEL 3/34 G
WATER VAPOR PERMEATION ANALYZER

High Performance WVTR Testing for Barrier Films and Packages

AMETEK® | **mocon®**

HIGHEST PERFORMANCE

WVTR Barrier Measurements...
Done Right.

High Performance Water Vapor Permeation Analyzer

The PERMATRAN-W model 3/34 G analyzer is the industries most trusted Water Vapor Transmission Rate (WVTR) instrument for low to high-level barriers. The analyzer is easy to use and offers the widest detection levels available in the market. It features two independent cells with interchangeable horizontal test cartridges that allow a wide variety of sample sizes and types to be easily and accurately tested. This analyzer provides test results within a wide detection range from 0.005 to 100 g/(m² • day).

Modulated IR Sensor

Using a patented modulated infrared (IR) technology, this sensor provides accurate and repeatable results with the longest life of any WVTR sensor on the market. It's the only modulated IR sensor system on the market to meet the ASTM F1249 standard.

Highly Versatile

The accuracy and wide testing capability of the 3/34 G make it an ideal WVTR instrument for both research and development as well as product support laboratories. It has the capability to test from monolayer to multi-layer films, coated films to coated paper board, and specialty films such as gels, lotions, bandages, diapers, or batteries. With an optional adapter it can also test complete or partial packages, flexible or rigid containers, bottles/closers, encapsulation materials, solar panels, windows, OLED, blister packs, and seals in the form of O-rings or gaskets.

Applications

The 3/34 G has interchangeable cartridges that work with other Next Generation analyzers. These cartridges increase accuracy, extend range, or make it possible to test a variety of unique or difficult samples. The variety of available cartridges are listed under accessories or can be found in the Permeation Analyzer Accessories brochure.

Industry Pioneer

Over 40 years ago, MOCON created the world's first multi-cell permeation instruments. The PERMATRAN series of analyzers was the first of its kind and has been the most trusted and longest lasting on the market. Whether your testing low or high water vapor permeation rates for barrier films or packages, the MOCON 3/34 G analyzer is a high-performance solution for you.

Removable Cartridges

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

TruSeal®

- Gas flushing of sample mounting seal protects chamber integrity
- Lowers background oxygen levels 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
- Built-in sensor protection

TRUSTED RESULTS

Industry Standard in Water Vapor Permeation Testing

The PERMATRAN model 3/34 G features our exclusive test cell drawer design with two horizontal removable test cartridges that are easy to load and improve test repeatability. With the touch of one button to open and close the drawers, the cartridge is automatically clamped in place with consistent and even force on the sample no matter what the thickness. This approach provides greater test repeatability than manual or cam clamping methods. All test cartridges incorporate MOCON's exclusive TruSeal® design that utilizes two seals and flush gas between them to prevent ingress into the test area. This reduces background levels, improves repeatability, and reduces the need to run individual zero.
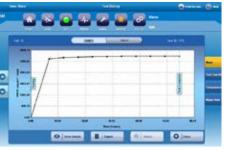
Advanced Control System

The user friendly WinPerm 2 control system features fully automated testing from start to finish including temperature, gas flow and RH control. Final test reports are automatically saved and can be set to automatically be printed and exported to permanent storage directories. The analyzer is compatible with PermWare™ your complete permeation laboratory data management system. The test modes options make testing known or unknown samples easy and repeatable. With as little as the press of one button a fully automated test can be initiated following preset stored parameters thus reducing operator variability. The intuitive color touch screen is easy to learn and use while the automated testing provides consistent results and less potential errors.

Auto-Test mode automatically adjusts the testing parameters to provide results for unknown samples

Advanced-Test mode is the most commonly used and is for specific parameters and conditions

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

Various additional cartridge options such as the Edge Effect and Reduced Area to expand your testing capabilities

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

Modulated IR Sensor

- Short exam times reduces overall test time to increase throughput
- Longest life water vapor permeation modulated IR sensor
- Accurate and repeatable results
- Most trusted modulated IR sensor that fully complies with ASTM F1249

Warranty

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

PERMATRAN-W MODEL 3/34
SPECIFICATIONS

Industry Standards

- ASTM F-1249
- GB/T 26253-2010
- TAPPI T557
- GB/T 31355-2014
- JIS K7129
- ISO 15106-2

Dimensions & Weight

Interior Dimensions and Weight

Depth: 23" or 58,0 cm
Width: 12" or 30,4 cm
Height: 15.5" or 39,4 cm
Weight: 95 lbs. or 42,1 kg

Conformance Standards

- CE, UL, CSA Safety Compliance

Connectivity

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

Accessories

- Reduced area cartridge
- Edge effect cartridge
- Custom Engineered Test Cartridges
- Package testing adapter
- PermWare software for data collection and remote monitoring

Performance Specifications

Test Temperature Range	10℃ to 40℃ ± 0.2℃
Controlled RH Testing Ranges	100% and 5% to 90% RH ± 3 RH
Maximum Film Thickness	Up to 120 mil, 3 mm
Carrier Gas	Nitrogen (99.7% N^2 or better)

Technical Specifications

Models		Test Ranges			Resolution	Repeatability
		$g/(m^2 \cdot day)$	$g/(100\ in^2 \cdot day)$	$g/(pkg \cdot day)$	$g/(m^2 \cdot day)$	$g/(m^2 \cdot day)$
Model 3/34 G	Normal (50cm²)	0.005 to 100	0.0003 to 6.45	0.000025 to .05	0.0002	1 or 5%*
	Reduced Area Cartridge (5.64cm²)	0.044 to 8900	0.0027 to 57.2	-	-	-

Based on range and flow

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