

## PERME® W3/130 Water Vapor Transmission Rate Tester

Professional, High-end and Intelligent WVTR Tester

### Professional

This instrument is based on the humidity sensor method, and is professionally applicable to the water vapor transmission rate test of film specimens. It is equipped with three individual test dishes, and the testing process is completely automatic and conforms to international standards.

- 3 identical or distinct specimens can be tested simultaneously with independent test results
- Equipped with high-precision humidity sensor to ensure accurate test result
- Wide range and high-precision of automatic temperature control to support various combinations of non-standard test conditions
- Convenient fast-access calibration port for temperature
- Reference film for fast and accurate calibration



### High-end

W3/130 system adopts Labthink's exclusive patent design of three diffusion cells integrated in one instrument for individual or multiple tests, which not only can test individually but also improve test efficiency by 3 times. It also utilizes the embedded computer control system that provides a better performance than traditional single chip.

- 3 diffusion cells integrated in one instrument with lower space occupancy rate and higher test efficiency
- Embedded computer control system provides safer and more reliable data management as well as test operation
- The instrument can be easily operated by a standard LCD monitor, a keyboard and a mouse; without requiring a PC
- The instrument is equipped with four USB ports and dual Internet ports for convenient input, output, and data transfer

### Intelligent

The instrument is equipped with Labthink's latest operating software, with user-friendly operating interface and intelligent data management functions. It also supports Lystem™ Lab Data Sharing System, which ensures uniform management of test results and test reports.

- Status monitoring and intelligent reminding of sensor calibration ensure instrument in the best working condition
- Convenient Embedded help document
- English or Chinese operating language
- Multi-level account control for better data management and protection
- Intelligent guide for test process to avoid mistaken operations.
- One time value input and the system automatically gives data comparison after each test
- Calibration data recovery function to reduce mistaken operation affects.

- Supports Lystem™ Lab Data Sharing System for better data management

## Test Principle

Mount the pre-conditioned specimen between the dry and wet chambers. The humidity sensor located in the dry chamber analyzes humidity changes and calculates the time for humidity to increase from the lower preset value to the higher one. The water vapor transmission rate and water vapor transmission coefficient are consequently obtained by periodically system measurement and analysis.

This test instrument conforms to the following standards:  
ISO 15106-1, ASTM E398, TAPPI T523, JIS K7129

## Applications

This instrument is applicable to the determination of water vapor transmission rate of:

<b>Basic Applications</b>	Films	Including plastic films, plastic composite films, paper-plastic composite films, coextruded films, aluminized films, aluminum foils, aluminum foil composite films and many others
	Sheeting	Including engineering plastics, rubber and building materials, e.g. PP, PVC, PVDC and nylon
	Paper and Paper Board	Including paper and paper board
	Solar Back-sheets	Including solar back-sheets
	LCD Monitor Films	Including LCD monitor films
	Textiles and Nonwovens	Including textiles and non-woven materials
	Aseptic Wound Protecting Films and Face Masks	Including aseptic wound protecting films and face masks

## Technical Specifications

Specifications	Film Test
Test Range	0.05 ~ 1000 g/m <sup>2</sup> ·24h
Accuracy	0.01 g/m <sup>2</sup> ·24h
Specimen Size	108 mm x 108 mm
Specimen Thickness	≤ 3 mm
Test Area	50 cm <sup>2</sup>
Temperature Range	15°C ~ 55°C (ambient temperature 23°C)
Temperature Accuracy	0.1°C
Humidity Range	0~100%RH
Number of Specimens	3 with independent test results
Gas Supply	Dry Air (outside of supply scope)
Port Size	Φ6 mm PU Tubing
Instrument Dimension	690 mm (L) x 350mm (W) x 360 mm (H)
Power Supply	220VAC 50Hz / 120VAC 60Hz

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**Net Weight**55 kg

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**Configurations**

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<b>Standard Configurations</b>	Instrument, Professional Software, LCD Monitor, Keyboard, Mouse, Vacuum Grease, Square Sample Template and Valve Set.
<b>Optional Parts</b>	Reference Film, Sample Cutter, Vacuum Grease, Printer (compatible with PCL3) and Lystem™ Lab Data Sharing System.
<b>Note</b>	<ol style="list-style-type: none"><li>1. The gas supply port of the instrument is <math>\Phi 6</math> mm PU tubing;</li><li>2. Customers will need to prepare for gas supply and distilled water (HPLC grade).</li></ol>

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**Please Note:** Labthink is always dedicated to the innovation and improvement of product performance and function. Therefore, technical specifications are subject to change without further notice. Please visit our website at [www.labthink.com](http://www.labthink.com) for the latest updates. Labthink reserves the rights of final interpretation and revision.