



# System Lyssy L80-6001 Water Vapor Permeation Analyzer

## Systech Lyssy L80-6001 Water Vapor Permeation Analyzer

The Lyssy L80-6001 Water Vapor Permeation Analyzer is a highly automated WVTR tester featuring the latest in advanced humidity sensor technology. Ideal for testing any barrier type, including barriers with high permeability (like Gore-Tex).

Brought to you by Systech, our unique specialist moisture, gas and oxygen testing brand, the Lyssy L80-6001 Water Vapor Permeation Analyzer delivers precise, dependable, and rapid WVTR measurements with exceptional cost-efficiency.

### Next-level water vapor transmission rate (WVTR) testing

The Lyssy L80-6001 is the seventh generation of our tried and trusted L80 series of permeation analyzers, and has supported R&D laboratories all over the world for several decades.

The Lyssy L80 series has evolved over the decades, and the L80-6001 Water Vapor Permeation Analyzer showcases our most advanced model, engineered for a wide array of barrier testing.

### Key features of L80-6001:

- **Proprietary, fully owned system architecture** for long term support and seamless integration
- **Improved temperature control** with  $\pm 0.1$  °C precision across 20 °C – 50 °C
- **Humidity** 10% or 35% RH in measuring chamber (equivalent to 90% or 65% RH differential over the sample) - cross check with standard
- **Enhanced reading stability** via advanced sensor calibration and real time drift compensation
- **Fully enclosed measurement chamber** with sealed door sample insertion to minimize environmental perturbations and **reduce test variability**
- **Unmatched speed, accuracy, and reproducibility** across 0.03 – 10,000 g/m<sup>2</sup>-day
- **Versatile WVTR solution** the L80-6001 is optimized for testing broad range of barrier materials

### Technical Specification:

<b>Applications</b>	Permeation Testing
<b>Materials</b>	Film, Paper, Plastics & Polymers
<b>Measuring Range</b>	0.03 – 10,000 g/m <sup>2</sup> -day
<b>Temperature Control</b>	20 °C – 50 °C ( $\pm 0.1$ °C)
<b>Humidity Range</b>	10% or 35% RH in measuring chamber (equivalent to 90% or 65% RH differential over the sample)
<b>Sample Area</b>	Low permeability: 50 cm <sup>2</sup> High permeability: 2.4 cm <sup>2</sup>
<b>Sample Thickness</b>	Up to 6 mm
<b>Minimum Sample Size</b>	10 × 10 cm
<b>Compliance</b>	ASTM E398, ISO 15106 1, JIS K 7129, TAPPI T523, NF H00 044
<b>Power</b>	110/230 VAC, 50/60 Hz
<b>Weight</b>	26 kg
<b>Dimensions</b>	(W) 400 mm x (H) 480 mm x (D) 470 mm

### Clear user interface and efficiency

- **Advanced software and integration:**  
The Lyssy L80-6001 can operate autonomously as a self-contained instrument or seamlessly integrate with any PC via our proprietary PermeTrace software for advanced control and data management.
- **Operational efficiency:**  
Proprietary software automates parameter setup, equilibrium detection, and data logging, eliminating manual input errors.
- **Automated report generation:**  
Data export (CSV, PDF)
- **Low maintenance and high uptime:**  
Self diagnostic routines notify maintenance needs, while sensor modules maintain accuracy for over 5 years under normal use.

## Rigorous quality control water vapor transmission rate testing

Leveraging the ASTM E398-compliant Dynamic Relative Humidity Measurement technique, the Lyssy L80-6001 delivers rapid, high-precision WVTR analysis across a broad transmission range, ensuring reproducible, industry-standard results every time.

The L80-6001 provides efficient, accurate and stable measurements for WVTR testing.

- **Extremely fast:** Typical cycle times under one hour for most permeability ranges; faster for highly permeable materials.
- **Accuracy:** Standard deviation < 5%; reproducibility tolerance as low as 1.5%.
- **Range:** Purpose-built for a variety barrier applications and designed to adapt seamlessly to your specific requirements, the Lyssy L80-6001 delivers rapid, high-throughput WVTR testing—accurately quantifying permeation rates up to 10 000 g/m<sup>2</sup>-day with industry-leading reproducibility.

## Versatile WVTR testing functionality

The Lyssy L80-6001 measures the water vapor transmission rate of variety of materials, including plastics, films, laminates and paper barriers. It is ideal for testing “breathable” or high-permeability textiles and membranes, and is particularly well-suited for those in the research and development of new or unique barrier materials.

### Operational Principle

Utilizing a dynamic relative humidity sensor method in a closed cell, the L6001 subjects a coated sample to a defined humidity gradient. A highly sensitive RH probe in the dry chamber tracks moisture ingress continuously, delivering real time WVTR readings without carrier-gas artifacts.

### Disclaimer

The information contained in this document is liable to modification from time to time in the light of experience and our policy of continuous product development. Check the Industrial Physics website for the latest version.

## Features & Benefits:

- Low cost, low maintenance WVTR testing
- Easy-to-use operator interface with automated test capability
- Can operate as a standalone unit or coupled with any PC utilising our Perm-Trace software
- One instrument solution that can test and measure broad range of barrier types, including highly permeable materials
- Broad WVTR testing range (0.03 – 10,000 g/m<sup>2</sup>-day )
- Reproduces accurate real-world conditions
- Reduced test variability through sealed door chamber design and sensor stabilization algorithms slash cycle to cycle noise
- Global standards compliance - ASTM E398, ISO 15106 1, JIS K 7129, TAPPI T523, NF H00 044
- Proprietary PermeTrace software automates parameter setup, equilibrium detection, and data logging, eliminating manual input errors
- Low maintenance and high uptime through self diagnostic routines
- Sensor modules maintain accuracy for over 5 years under normal use
- 5.7" color touchscreen with intuitive software GUI
- Ethernet, USB, and RS 232 interfaces for network

## Ordering Information:

Article Number	Article Description
L80-6001	Systech Lyssy L80-6001 Water Vapor Permeation Analyzer

## Contact Details

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