

# Lyssy L80-5000



## Water Vapour Permeability Tester

Easy and reliable testing for water vapour permeability



The L80-5000 is the latest generation of the proven L80 series, which has been used successfully for decades in many labs.

With the L80-5000, the testing of water vapour permeability becomes very simple. The L80-5000 is easy to operate, and its reliable testing principle and low degree of maintenance have demonstrated to users worldwide the superiority of the Lyssy testing method.

The L80-5000 is easy to set up and operate through the built-in alphanumeric keyboard and digital display.

With a built in printer and RS232 interface for communication with a PC the L80-5000 also enables easy test documentation and statistical tracking.

### Features & Benefits

- Easy to use operator interface
- Simplicity in operation due to the high degree of automation - the quality of tests performed is less operator dependent
- Fast and accurate test result
- Extremely broad testing range, covering low and high permeability
- High repeatability of testing results
- Automatic equilibrium detection
- Automatic temperature control
- Easy set-up of test parameters and sample data
- Complete traceability in test documentation, data logging and error reports
- Easy to use test sample holders - no grease needed for sealing
- RS232 Interface for communication with PC
- Built-in printer
- Low degree of maintenance

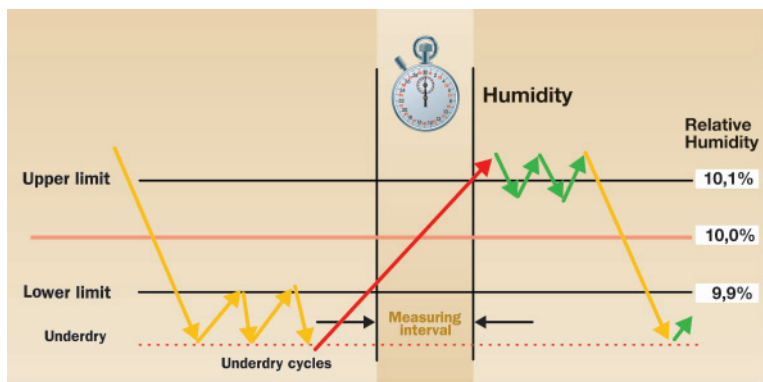
### Sample cards

The preparation of a sample is for the L80-5000 is accomplished in minutes. No grease or glue is required for a tight seal around the sample in the chamber. The test sample is affixed to the self-adhesive sample card, which is inserted into the L80-5000 test chamber, separating the upper and lower chamber. The Lyssy L80-5000 is able to measure high permeability materials using special sample reduction cards that decrease the surface area of the sample.

This reduction of the surface prevents the system from getting saturated, and therefore it becomes possible to dry down the upper chamber of the instrument and obtain a permeability measurement.



## Example of measuring cycle L80-5000



## Technical Specifications

### General description

Dimensions	480H x 400W x 470D cm
Weight	Approximately 26kg
Measuring range	0.03 - 10,000 g/m <sup>2</sup> /day as standard
Sensor life	More than 5 years under normal conditions
Voltage	230 VAC or 115/100 VAC
Conforms to the following standards	ASTM E398-03, ISO/CD 15106, JIS K 7129, TAPPI T523 om-82, NF H00-044

### Measuring

Measuring temperature range	5 - 70°C. Practical range 30-70°C, with built-in temp. control. For measuring below 30°C an external cooling water thermostat is required
Humidity range	5% RH to 50% RH in measuring chamber

### Sample Requirements

Measuring area	Low permeability samples - 50cm <sup>2</sup> High permeability samples - 2.5cm <sup>2</sup>
Sample thickness	Up to 12mm
Minimum sample size	10 x 10cm

### Data logging

Memory	1 record with 1427 measurements or 109 records with 10 measurements or 353 records with 1 measurements
Data Transfer	RS232 Serial output to PC or external printer
Printer	Built-in 80 mm thermal printer

### User Interface

Keyboard	Alpha numeric
Display	Vacuum fluorescent display

### Operational Environment

Ambient temperature	5-40°C
Ambient humidity	10-90% RH (non-condensing).

Systech Illinois have over 25 years experience of providing analysis solutions for a wide range of industries. From our manufacturing plants in the UK and U.S we produce gas analysers for industrial process industries, headspace analysers for monitoring gas flushing of food products, and our range of permeation analysers.

## Fast, accurate and versatile

The L80-5000 is very fast at measuring, and the more permeable the sample the shorter the measuring time. In addition to its short testing times and broad testing range, the L80-5000 has a high degree of accuracy.

A series of tests by users have proven that the standard deviation of the Lyssy instruments is lower than  $\pm 5\%$ , and the reproducibility tolerance is as low as 1.5% (depending on the material).

The high accuracy and extremely broad testing range of 0.03-10,000 g/m<sup>2</sup>/day are achieved by using a very sensitive and reliable humidity sensor, which is located directly in the measuring chamber. This test method is the best reproduction of real-life conditions, since no carrier gas or extractive measuring technique is used.

The humidity sensor is very stable, regardless of the humidity range in which it is operated. As a result, the L80-5000 alternates easily and quickly between low and high permeability measurements - typically, the change can be done in one hour or less using the function called "Simulated Test standard". The tester automatically detects the attainment of equilibrium when the sample has stabilised.

## Measuring temperature

The water vapour permeability of many products is strongly temperature dependent. That is why the L80-5000 can be used at precisely the required measuring temperature. However in order to test at temperatures below 30°C, the measuring chamber must be cooled to the required temperature via an external water cooling thermostat, which can be supplied as an optional accessory.

**Systech Instruments Ltd (UK)**  
17 Thame Park Business Centre,  
Wenman Road,  
Thame, Oxfordshire OX9 3XA  
Tel: +44 (0)1844 216838  
Fax: +44 (0)1844 217220  
E-mail: advice@systech.co.uk  
www.systechillinois.com

**Illinois Instruments, Inc (U.S)**  
2401 Hiller Ridge Road  
Johnsburg, Illinois 60051  
U.S.A  
Tel: +1 815 344 6212  
Fax: +1 815 344 6332  
E-mail: sales@illinoisinstruments.com  
www.systechillinois.com

**Illinois Instruments (Thailand)**  
6th fl Nopnarong Bldg No7  
Ladprao23, Jatujak, Bangkok 10900  
Thailand  
Tel: +66 (0)2938 0798  
Fax: +66 (0)2938 1058  
E-mail: mai@illinoisinstruments.com  
www.systechillinois.com

**Systech Illinois (China)**  
Room 519, No.3 FuCheng Building  
No. 900 Quyang Rd, Hongkou district,  
Shanghai, China 200434  
Tel: +86 21 65533022  
Fax: +86 21 65539651  
Email: info@systechillinois.cn  
www.systechillinois.cn