

L80-5000

Data sheet

Water Vapour Permeability Tester

- Easy and reliable testing for water vapour permeability



Introduction to the L80-5000

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 PBI-Dansensor 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

- 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
- Test results are expressed directly in $g/m^2/24$ hrs
- Low degree of maintenance

Sample cards for L80-5000

The preparation of a sample 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.



 **PBI Dansensor**

Lyssy Line of Permeability Testers

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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 +/- 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/m²/24 hrs 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.

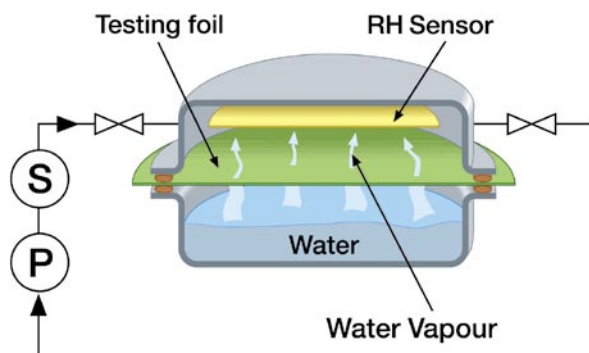
The humidity sensor is very stable, regardless of the humidity range in which it is operated. As a result, the L80-5000 alternates easily and quickly between low and high permeability measurements - typically, the change can be done in one hour or less using the function called "Simulated Test standard"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

Measuring temperature

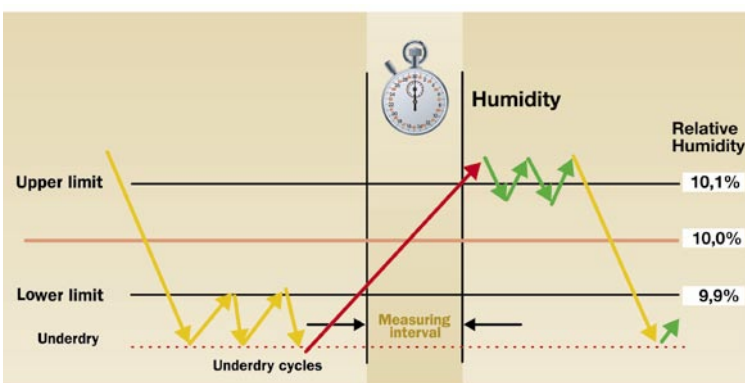
The water vapor permeability of many products is strongly temperature dependent. That is why the L80-5000 can be used at precisely the required measuring temperature. However in order to test at temperatures below 30° C, the measuring chamber must be cooled to the required temperature via an external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



L80-5000 measuring cham-



Example of measuring cycle L80-5000



Technical Specifications

General description	
Tester dimensions:	480x400x470 cm (HxWxD)
Weight:	Approx. 26 Kg
Measuring range:	0.03 - 10,000 g/m ² /24 hrs as standard
Sensor type:	Capacity humidity sensor
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 temp. 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
Equilibrium detector:	0 - 99.99%
Reproducibility:	Low permeability samples - better than 5% High permeability samples - better than 1%
Calibration:	Using test standards
Sample requirements	
Measuring area:	Low permeability samples - 50 cm ² High permeability samples - 2.5 cm ²
Sample Thickness:	up to 12 mm
Min. sample size:	10 cm x 10 cm
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)

PBI-DS-Dash-Permline-L80-5000-UK-1



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