

# Lyssy L100-5000



## Manometric gas permeability tester Versatile and short testing time

The manometric gas permeability tester is an extremely versatile instrument that can measure the permeability of practically any common gas or gas mixture through films and foils.

Typical gases measured include air, oxygen, nitrogen, carbon dioxide, hydrogen and helium.

With the manometric principle, this instrument utilises one of the oldest and most recognised gas permeability testing methods: pressure change via gas transmission through films.

With two measuring chambers, ease of operation through the alpha-numeric keyboard and digital display, the L100-5000 has the versatility of measuring permeation of almost any gas, both for advanced laboratory research as well as for quality control in a production setting.

The L100-5000 tester is capable of measuring within a broad range of low and high permeabilities, and can thus be used to test a variety of materials. Test results are exposed directly in  $\text{cc}/\text{m}^2/\text{day}$ , and are documented using the built-in printer.



### Features & Benefits

- Automatic equilibrium detection
- Flexibility in the use of the two measuring chambers
- Suitable for all permanent, non-corrosive gases
- Fast and accurate test result
- Compact instrument
- Built-in printer
- Test results expressed directly in  $\text{cc}/\text{m}^2/\text{day}$
- Easy to use operator interface
- Simplicity in operation due to the high degree of automation - the quality of tests performed is less operator dependent
- Extremely broad testing range, covering low and high permeability
- High repeatability of testing results
- Complete traceability in test documentation, data logging and error reports
- Easy to use test sample holders
- Low degree of maintenance

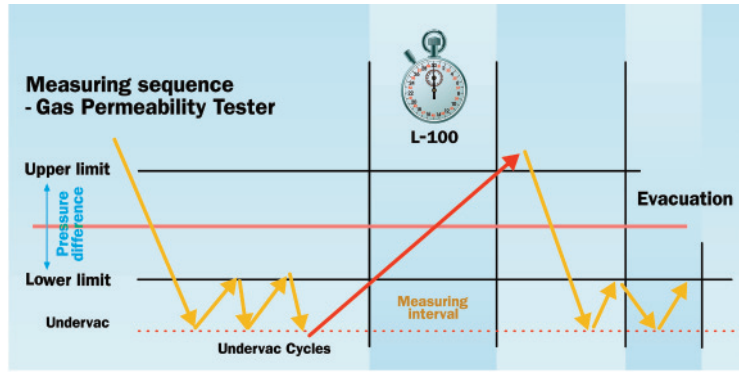
### Sample cards

The preparation of samples for the L100-5000 is fast and easy. 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 one of the test chambers, separating the upper and lower chamber.



## Example of measuring cycle L100-5000



## Technical Specifications

### General description

Dimensions	480H x 400W x 486D cm
Weight	Approx. 28 Kg
Measuring range	1 - 10,000 cc/m <sup>2</sup> /day as standard
Measuring principle	Manometric, first principle
Voltage	230 VAC or 115/100 VAC
Measuring temp. range	5 - 75°C. External water thermostat required for temperature control.
Conforms to the following standards	ASTM D1434-82, DIN 53380-2, ISO 15105-1, JIS K7126
Required accessory for operating	2-step rotary vacuum pump.

### Measuring

Equilibrium detector	0 - 99.99%
Reproducibility	Better than 2.5%
Calibration	Using test standard

### Sample requirements

Measuring area	Low permeability samples - 50 cm <sup>2</sup> High permeability samples - 2.5 cm <sup>2</sup>
Sample Thickness	Up to 5 mm
Min. sample size	10 x 10 cm

### Data logging

Data transfer	Prepared for RS232 Serial output to PC or external printer.
Printer	Built-in 80mm thermal printer

### User Interface

Keyboard	Alpha-numeric
Display	Vacuum fluorescent display

### Operational Environment

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

## Accurate and versatile

The L100-5000 can be used to test a variety of products, including packaging films for food and tobacco; material for contact lenses; coated paper; and complex protection membranes.

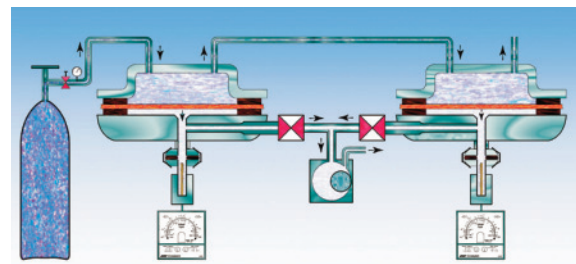
The L100-5000 tester is capable of measuring both high and low permeability with a broad measuring range from 1-10,000 cc/m<sup>2</sup>/day. The two chambers of the L100-5000 makes the instrument very versatile, providing the following range of testing possibilities:

- Different samples, same gas
- Same sample, different gases
- Same samples and gas at different temperatures (two external water thermostats required)

## Measuring temperature

The L100-5000 does not have internal temperature control. Since most test standards recommend measuring at 23°C, an external cooling thermostat is required. However, measurements can still be done without the external cooler at 5-10° above the ambient temperature. If the two measuring chambers should be operated at two different temperatures, two external coolers are required.

## Measuring principle of L100-5000



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