

LIPPKE™ Model 4500

PC Controlled Package Test System

The Lippke Model 4500 package test system is a stand alone, computer operated bench top instrument designed to perform virtually all currently accepted test methods used to measure the seal strength, leak detection and package integrity of flexible, rigid, porous, laminate and foil type consumer and medical packaging.

The Lippke Model 4500 is the next generation upgrade to the SKYE 2000 A&B systems and all other microprocessor based instruments currently marketed. It comes equipped with an extensive array of standard features, available accessories and services and meets applicable ISO & ASTM Standards.

Test Method Capabilities

- **Burst Test**

Measures the bond strength of package seals and material strength by measuring the peak pressure at which the package seals separate or the package material shears. With its high flow feature the Lippke™ 4000 can easily test porous as well as non-porous packages.

- **Decay Test**

Measures the hermetic seal of package seals by measuring a constant pressure, usually @ 50% of burst pressure, for a specific period of time to determine whether the package seal or material has a leak path to atmosphere.

Optional Capabilities

- **Multi-Test**

Enhance the capability of the Lippke™ Package Test System by including the optional Multi Test Package. This package provides 5 additional modes of test method capability supplementing the standard individual Decay, Leak, Burst and Seal Strength tests.

The 5 additional test modes are:

- Creep Test
- Creep to Fail
- Creep and Leak Test
- Creep and Burst Test
- Creep, Leak and Burst Test

This productivity feature enables the researcher to perform combination sets of tests simultaneously on the same package, reducing time and testing cost and providing a better understanding of the dynamics of a package's resistance to peel, overall seal strength and hermetic seal under a broad range of test conditions.

- **Precise Leak Test**

Measures the absolute hole size of a leak by maintaining a constant pressure inside the package and measuring the flow rate of gas necessary to maintain that pressure level in accordance with Hagen-Poiseuille Law.

Standards Compliance:

- ISO-11607
- ASTM F1140, F2054, F2095

Optional Services:

- IQ Template
- Test Method Validation Plan Template
- IQ, OQ, PQ Validation Services
- Certified Calibrations



Providing instruments & services
specializing in gas detection, analysis,
& control for over 40 years.

Typical Applications

- Flexible, Semi Rigid, Rigid Packages
- Polymer, Paperboard, Metal Based Materials
- Unfilled, Filled (solids, liquids & powders)
- Open, Closed Packages
- Consumer, Food, Pharmaceutical & Medical Packaging

Standard Features

- 1, 3 or 7 Bar Test Pressure Capability
- Microsoft® Access Powered Test Results Database
- Query Test Results by 10 Different Search Parameters
- Infinite Product/Protocol Test Set-Up Database
- LAN, USB, Bluetooth Network Capability
- Menu Driven Digital Tests Set-up and Controls
- Graphical Test Plot Display with Statistical Outputs
- High Air Flow Capability for Porous Material Testing
- Eight Test Modes Capability for Seal Strength & Leak Testing
- Accessory Port (Footswitch)
- Metric & Standard Unit Readouts
- Energy Saver, Low Power Consumption Design

Accessories*

- Computer Systems
- Pac Check® Oxygen Headspace Test System
- In-Line Filter Set
- Adapter Options to Test Tubes, Medical Bags and More
- Customized Adapters & Fixtures
- Restraining Plates Enclosures
- Open Package Fixtures
- Engineered Septums

* Accessories sold separately. See our accessories and services brochure for a complete list of optional products.

Technical Specifications

Air pressure supply	4.0 - 8.0 bar / 60 - 120 psi
Supply voltage	100 - 250 V AC with built in surge protection
Frequency	50/60 Hz \pm 1 Hz
Environmental temperature	+15 °C to +40 °C
Ambient Operating conditions	0-90% Relative Humidity (non-condensing)
Electrical	UL Listed, IP54
Pressure readout units	Pounds Per Square Inch (PSI), Millibar (mbar), Millimeter of Mercury (mmHg)
Timer Range	1 second to 9,999 minutes
Three Measuring Ranges	14.5 PSI (1 Bar) 43.5 PSI (3 Bar) 101.5 PSI (7 Bar)
Pressure per Measuring Range	14.5 PSI (1 Bar) 43.5 PSI (3 Bar) 101.5 PSI (7 Bar)
Pressure Sensor Accuracy per Measuring Range*	0.007 PSI (0.5 mbar)* 0.03 PSI (2.0 mbar)* 0.07 PSI (5.0 mbar)*
Repeatability per Measuring Range*	0.007 PSI (0.5 mbar)* 0.03 PSI (2.0 mbar)* 0.07 PSI (5.0 mbar)*
Certifications	CSA, CE
Standards	ASTM F1140, ASTM F2054, ASTM F2095
Languages	English, Spanish, German, Italian, French, Swedish & Polish
Dimensions	Width 13.8 (inches), Depth 13.8 (inches), Height 7.0 (inches)
Weight	14.3 (pounds)
Communication	RS232 Port
Controls	Electronic Pressure & Flow Controls
Display	High Resolution LCD
Power	100-230V, 50/60 Hz, 20 Watts (operation), 10 Watts (stand-by)

* \pm the specified pressure or 1% of value, whichever is greater.

Consulting & Testing Services

MOCON maintains an applications and testing laboratory to assist customers in realizing the full potential for their MOCON instrument. Seminars and intensive training classes are held for those interested in maximizing their understanding of the systems, technology, and operating procedures. Call your MOCON representative for more information on these programs or for your system quotation.

MOCON now provides educational webseminars on various test methods, training, product use, and customer specific applications every month to better serve the needs of our customers. Contact webinars@mocon.com today for more information or to submit topic suggestions.

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