

# LIPPKE 4000/4500

Leak and seal strength measurement on all types of flexible, semi-rigid and rigid packages



## Package test system

The Lippke® package test system is a bench top instrument designed to perform many currently accepted leak test methods. It measures the seal strength and package integrity of flexible, rigid, porous and laminated foil for food, pharma and medical packaging. It has an extensive array of standard features, available accessories and services, and meets applicable ISO & ASTM Standards.

The Package Test Systems Lippke 4000 and Lippke 4500 are designed with the user in mind and provides exact, definable and reproducible test results.

\* The Lippke 4000 is a standalone test system with integrated user interface and can be used in both production and laboratory environments.

\* The Lippke 4500 is a PC based system that provides data, graphing, statistical analysis and data output capabilities.

### Benefits

- Works with a wide range of package types
- No trace gas needed
- Seal strength testing
- Quantifiable leak detection
- Creep test (optional)
- Creep to fail test (optional)
- Bubble test (optional for Lippke 4500)

### Features

- Multilingual user interface
- Compliant with ASTM F-1140, F-2054, F-2095, F-2096, 21 CFR Part 11, ISO-11607
- Optional multitest capabilities:
  - Creep and leak
  - Creep and burst
  - Creep, leak and burst

# HOW DOES IT WORK?

**1: Seal strength test:** The package is pressurized at a given rate to the point when the seal will burst. (Burst test in compliance with ASTM F2054).

**2: Leakage testing:** The package is pressurized to a pre-determined level and is held at that pressure for the required test time. The pressure loss is a quantifiable and repeatable test. (Pressure management and leakage testing according to ASTM F2095).

**3: Creep Test:** The package is pressurized to a pre-selected pressure, near the burst limit and held for a period of time. The seal performance is evaluated for holding under pressure for the prescribed time. Optional test mode: Creep and creep to fail. ASTM F1140.

**4: Multi-Test:** An optional multi-test feature can test the same package in up to three different test modes. Each mode is completed on a single sample, reducing sample loss. The test modes are: Creep and leak, creep and burst, creep, leak and burst.

**5: Bubble Test:** An optional test for Lippke 4500. Place the package under water. The package is then pressurised to a pre-defined pressure and held there at a pre-defined time. (Bubble test in compliance with ASTM F2096).

ASTM Restraining Plate\*:



Pneumatic Package Clamp PPC 300\*:



Closed Package Assembly\*:



\* optional

## Technical Specifications

Available configurations	Lippke 4000	Lippke 4500
Power supply	103 - 264 VAC	103 - 264 VAC
Dimensions	13.5x10.3x5.1 inches (w x d x h), 34.4x26.2x13 cm	13.5x10.3x5.1 inches (w x d x h), 34.4x26.2x13 cm
Weight	14.3 pounds / 6.5 kg	14.3 pounds / 6.5 kg
Display	Integrated	External pc monitor
Common technical specifications		
Air pressure supply	4 - 8 bar / 58 - 116 psi	
Mains frequency	47 - 63 Hz	
Test time	1 - 10,000 sec.	
Pressure units	Millibar (mbar), millimeter of mercury (mmHg), pounds per square inch (psi)	
Number of test programs	500	
Environmental temperature	+15 °C - + 40 °C (+59 deg. F - 104 deg. F)	
Environmental RH	0 % - 90 % non condensing	
Two measuring ranges	1) 10 ... 1,000mbar/0.145 ... 14.5 psi, 2) 200 ... 3,000 mbar/2.9 ... 43.5 psi	
Resolution per measuring range	1) 0.1 mbar/0.0015 psi, 2) 1 mbar/0.015 psi	
Accuracy of measurement	1) ± 0.5 mbar/0.007 psi or 1%* **, 2) ± 1%**	
Repeatability per measuring range	1) ± 0.5 mbar/0.007 psi or 1%* **, 2) ± 1%**	
Communication	RS232 port	
Compliances	CE	
Standards	ASTM F-1140, F-2054, F-2095, F-2096, 21 CFR Part 11, ISO 11607	

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Specifications subject to change without notice.

\* whichever is greater  
\*\* in specified range