

PRODUCT INFORMATION

March 2023

Leak detection technology for flexible packaging



The AlphaLeakTester is a Leak Detector dedicated to flexible packaging testing for the food, pet care and cosmetic Industries. It has been specifically designed for laboratories in Factories that have to follow stringent Food Safety Quality Inspection procedures and processes like ISO 22000 & HACCP. The leak test values are available in real time.

Current leak testing methods.

80% of flexible packaging used by food and pet food manufacturers, as well as the cosmetics industry, use immersion testing, also known as "bubble testing" to detect leaks.

While the bubble test helps to make leaks visible, it only works for large leaks and does not enable any measurement, even though HACCP audits under ISO 22000 (food safety) make the measurement of critical points mandatory.

Our instruments allow a very precise measurement of leaks. We use the constant pressure flow measurement method (DIN 55508-1 of 01/02/2018), the only method that works with flexible packaging.

<u>AlphaLeakTester unique feature: Altitude Re-</u> sistance Simulation.

The objective of this simulation is to determine at what altitude a flexible packaging starts to leak when it is transported by air.

The flexible packaging is exposed to a stepwise differential pressure increase (mBar), that exactly replicates the stress encountered during air transportation because of altitude increase. At the same time, a leak test is being performed. The manufacturer can therefore accurately identify the altitude at which his flexible packaging is starting to leak.

All parameters are configurable.

AlphaLeakTester main advantages:

- Measure leaks > 5 μ m.
- Data immediately available.
- Accurate analyzed results.
- ISO 22000 & HACCP compliance.
- Modified Atmosphere Packaging (MAP) packaging Control.
- Resistance altitude simulation (unique feature).
- Brand protection and lasting taste for your products.
- Manual calibration check.
- Visualization of the size of the leak via a coupler connection (optional CharlieH2O).

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Operating instructions:

Stick a septum on the sample you want to test. Perforate the package with the needle through the septum, taking care not to stick it into the product contained in the package. Press the start button on the screen and the leakage detection test starts.

Results are visible on the **AlphaLeakTester** screen, these can be transferred instantly to a computer via a USB memory stick to study the results on a pivot table. These can also be visualised on a Gauss chart together with the pre-set parameters.

Technical specification:

The **AlphaLeakTester** operates according to Flow measurement at a Constant Pressure, following DIN 55508-1 of 01/02/2018.

AlphaLeakTester:



Leak Detector unit.

Structure: steel and ABS.

Display: 4.3" resistive touch screen.

Internal air pump.

Electronic pressure controller from U.S.A., 1000 mbar scale.

Mass flow meter from U.S.A., 1000 sccm scale.

Microprocessor: embedded ATMEL2560, 16 Mhz.

Calibrated leak port.

Foot print: 200 x 250 mm Weight: 4 Kg.

Optional: semi-automatic flow calibration check.

Astaara provides optional calibrated leaks for flow (**CharlieCal**). Each calibrated leak is delivered with a calibration certificate. A document is provided with the **CharlieCal** that allows to verify the corre-

spondence between the flow rate measured by the Astaara leak detector and the value of the calibrated leak.

If your Septum consumption becomes too expensive, you have the option of connecting an AlphaTower at a later stage. Please consult us for more information.

The **AlphaLeakTester** is guaranteed 3 years.

WARRANTY TERMS AND CONDITIONS, other ASTAARA products, videos, dimensions, weights, drawings and further information @ www.ASTAARATECHNOLOGY.com.

Manufacturer: Astaara Technology Pte. Ltd. Singapore.

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