VeriPac LPX

100% IN-LINE AUTOMATED PACKAGE LEAK DETECTION

Product Overview

The VeriPac LPX Series is PTI's line of fully automated package quality inspection systems for 100% inline testing. The LPX enables enhanced automated testing that provides a high level of confidence in packaging line performance. The LPX is a practical and reliable solution to the problems associated with performing infrequent testing, allowing for process-related quality issues to be recognized and corrected sooner rather than later.

The VeriPac LPX features a dynamic robotic design, tailored to fit your production requirements. The LPX Series are scalable, modular solutions to meet production line demands. This adaptable platform provides reliable automated handling of a variety of packaging formats. Applications for LPX automation range from flexible packaging to rigid containers, and parenteral products.

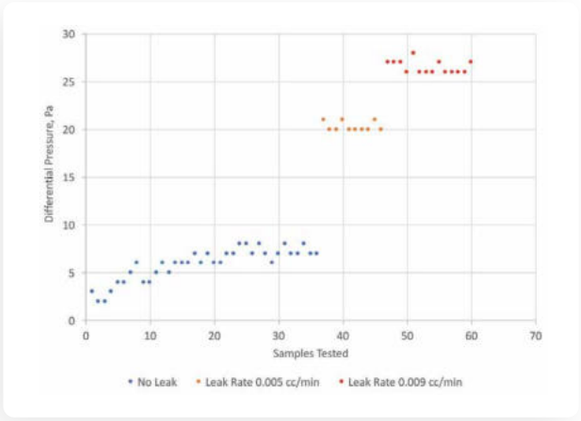


Figure 1. PTI's VeriPac vacuum decay technology reduces the baseline measurement for good samples and amplifies the test result for defective samples.

Vacuum decay is a deterministic method to provide reproducible and reliable results for leak testing of high-risk package applications. It can be applied to a wide variety of package formats and product types. The test involves placing a package in a test chamber, applying vacuum, and monitoring the vacuum level for any change, which would indicate the presence of a leak. Test chambers are configured according to package specifications, test sensitivity and handling requirements. The VeriPac LPX is modular providing the flexibility and versatility of easy changeover for testing different size packages on the same system.

Sensitivity and reliability go hand in hand with CCI testing. The VeriPac LPX 430.8S is the next generation automated inspection system for container closure integrity testing of parenteral products. Automated for 100% testing or batch release, the VeriPac 430.8S is an eight-station dual chamber design robotic testing platform for pre-filled syringes and vials, testing products filled with lyophilized product, small molecule liquids and Water for Injection (WFI).

Life Science CCI Services

Testing, Training & Consulting Services
Test Method Development Support
Validation Support and Deployment

Our expertise and services ensure your products meet the highest standards of performance and regulatory compliance

VeriPac LPX Automates CCI For Parenteral Products

An eight-station dual chamber design robotic testing platform for pre-filled syringes and vials

The robotic arm picks the syringes from the nested syringe trays and places them in the test chambers.

Defects are automatically placed in the reject tray, while pass syringes are returned to the nested tray.

PTI's Vacuum Decay Difference

Achieves highly sensitive testing with leak detection of critical defects down to the 1 micron range. Parenteral applications require this level of sensitivity, with the maximum allowable leakage limit (MALL) at the single digit micron level to eliminate any risk to the patient. The VeriPac LPX for parenterals also features a small footprint design. The test chambers can be swapped out for easy changeover to test vials or syringes with different fill volumes.

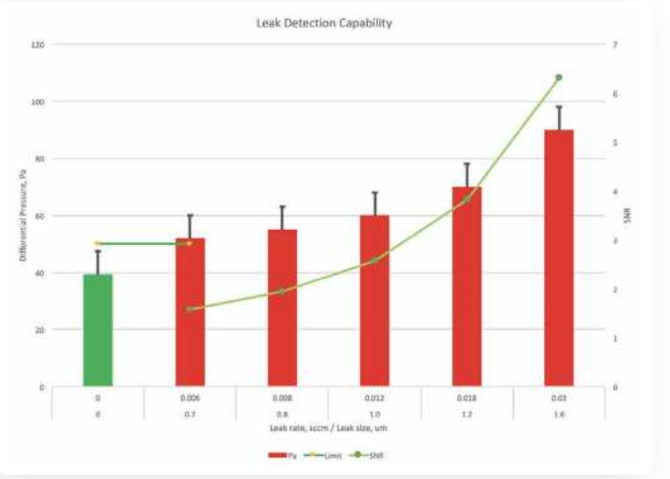
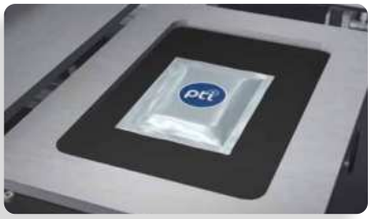


Figure 2. PTI's VeriPac vacuum decay technology is geared towards detecting leaks in the maximum allowable leakage limit (MALL) range for parental packaging and can also be applied to flexible and semi flexible package formats. The technology allows for control of the test system volume and maximizes the signal-to-noise ratio (SNR) between good and defective samples.

VeriPac LPX for Flexible Packaging

The VeriPac LPX for flexible packaging enables continuous testing and throughput of pouches, stick packs, sachets and other flexible packaging formats. A high-speed robotic gripper arm will pick & place the packages into the VeriPac LPX test chambers where a rapid vacuum-based test is performed. A definitive PASS/FAIL result is displayed along with quantitative test result data. The packages will then be reintroduced to the product line to ensure continuous flow and seamless downstream handling. Rejects are automatically removed from the production line.

VeriPac LPX FLEX chambers can accommodate various size pouches and test multiple pouches in a single cycle.



Benefits

- Automated testing enables the highest level of container quality assurance Deterministic, quantitative test method
- ASTM Test Method F2338-24 and FDA standard, ISO 11607
- Distinct PASS/FAIL results
- Highly accurate test results - low false positives and false negatives
- High Signal Noise Ratio (SNR) for peak sensitivity and reliability
- Non-destructive, non-subjective, no sample preparation
- Pick-and-Place option back into the production line
- Auto reject option of defects removed from the production line
- USP <1207> compliant

Specifications

INSPECTION PLATFORM	Rotary and in-line configurations
PACKAGE TYPE	◦ Pouches ◦ Stick packs and sachets ◦ Cups, trays, bottles ◦ Vials and pre-filled syringes
PACKAGING MATERIALS	Tyvek®, paper, foil, film, poly, aluminum, plastic, glass, laminated materials
TEST CONFIGURATION	Automated for production line applications
TEST METHOD	Vacuum Decay – Single or Dual Transducer PERMA-VAC Technology
OPERATOR INTERFACE	Color Touch Screen
DATA COLLECTION	◦ View on HMI screen and electronic data collection ◦ PTI-ETHOS, CFR 21 Part 11 capability
TEST FRAME ENCLOSURE	◦ Stainless steel frame ◦ Lexan protective shielding for moving systems
TEST CHAMBER	Test Chamber design and number of test stations determined by package specifications, test sensitivity and handling speed
PICK & PLACE	Robotic Arm (4-axis or 6-axis) application dependent
RECOGNIZED TEST METHOD	◦ ASTM F2338-24 vacuum decay technology ◦ USP<1207> chapter guidance ◦ Annex 1
OPTIONS	Validation Qualification Package (IQ/OQ)