



LEAK TESTING

Multi-Q

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The Sepha Multi-Q is a multi-functional, non-destructive leak test and inspection system for rigid containers and flexible packaging



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The Sepha Multi-Q is a standalone, multi-functional, non-destructive leak test and inspection system that can be used in combination with interchangeable attachments to fit the full range of container types available on the market today.

The multi-functional system offers an all-in-one solution to test the integrity of all types of containers including sachets, pouches, bags, bottles, vials, ampoules, trays, devices and modified atmosphere packaging (MAP).

Using non-destructive methods including vacuum decay, pressure decay, (ASTM F 2338-09 (2013)) ramp to proof pressure, occlusion, and a vacuum flexible membrane, the Sepha Multi-Q provides the flexibility to test different containers in variable sizes for defect types including cracks, channels, gross holes as well as pinholes down to 5µm.

The lab-scale unit has a small footprint and offers the flexibility to switch between test attachments depending on product and specified test requirements. Test attachments can be easily changed and can be automatically detected by the system once in place. The relevant recipes for the selected attachment will be available to start testing immediately.

The non-destructive and deterministic test methods provide quick, reliable and repeatable results enabling customers to improve the accuracy of their leak detection procedures and reduce cost as the method prevents the packaging from being damaged.

Technical Specification

Test type Container Type	FlexiScan	Vacuum Decay	Pressure Decay	Ramp to Event	Occlusion
	Flexible/ Semi-Flexible packs/ pouches/sachets	Bottles, ampoules, vials, BFS, medical devices	Any liquid filled bottles, vials and ampoules	Component/device and parts	Component/device and parts
Measurement Range	Down to 12.5µm	Down to 5µm	Down to 5µm	Up to 0.5MPa (72.5psi)*	Part dependent
Test Cycle time	Starting from 10 seconds	Starting from 10 seconds	Starting from 10 seconds	Part dependent	Part dependent
Operation	Flexible membrane	Fixed tooling attachable to top of unit or via test port.	Fixed tooling attachable to top of unit or via test port.	Fixed tooling attachable to top of unit or via test port.	Fixed tooling attachable to top of unit or via test port.
Construction	Anodised Aluminium and Acrylic – capped ABS top Cover				
User HMI	10" WXGA 1280 x800 Pixels with resistive touch screen				
Connectivity	Active directory, network printing, central network storage, custom data MES/OPC connectors available. 3 x USB, ethernet port, external calibrated leak port				
Utilities	Electrical 24v DC 4A; Compressed Air 6 Bar or vacuum pump				
Features	LED status lights, wireless tooling detection, Flexible reports				

* Standard machine: 0.1 MPa; custom machine: 0.5 MPa

Key Features

Flexible Membrane

- Non-destructive, tool-less leak detection device designed for flexible or semi-flexible packages
- Using hybrid membrane technology, the flexible head utilizes the ASTM F2338-09(2013) test method to perform the leak test
- Can detect defect types including channel leaks weak seals and all sizes of pin holes*
- Test area: 250mm x 150mm**
- Can test packages that contain tablets/capsules/devices/powders
- Ideal for testing pouches, sachets and bags



Vacuum Decay

- Non-destructive, deterministic, quantitative test method
- Utilizes vacuum decay to identify leaks and channel leaks as low as 5µm
- Ideal for testing bottles, ampoules, vials, BFS, medical devices, PFS, pouches, trays and other containers
- Rapid test time as low as 10 seconds
- Utilizes the ASTM F2338-09(2013) test method to perform the leak test



Pressure Decay

- Non-destructive, deterministic, quantitative test method
- Utilizes pressure decay to identify leaks and channel leaks as low as 5µm
- Ideal for testing any liquid filled bottles, vials, ampoules and other containers
- Rapid test time as low as 10 seconds



* Pack dependent

** Custom sizes available on request

Other testing methods compatible with the Sepha Multi-Q include:

- Ramp to Event** - Destructive, deterministic, quantitative test method using pressure/vacuum to ramp to an event. Used for component testing to detect weak welds/seals etc
- Ramp to Proof Pressure** - Non-destructive, deterministic, quantitative test method using pressure/vacuum to ramp to a target pressure
- Occlusion** - Non-destructive, deterministic, quantitative test method using pressure drop/time. Typically used to test parts that must remain open to function correctly



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