

**C690B Nondestructive Package Leak Detector** is based on the vacuum decay method, designed and manufactured according to ASTM F2338 and other standards. It is professionally suitable for trace leakage detection of all kinds of food packaging bottles, cans, boxes, vials, ampoule, cartridge bottles, infusion bottles, prefilled syringes and other pharmaceutical packaging.



## Features Note 1

### Multi-stage Vacuum

- The principle of vacuum decay method is a non-destructive leakage detection method suitable for various types of packaging.
- The target vacuum degree can be set by the operator to meet testing requirements of different samples.
- Transparent test cell for easy observation of the sample state.

### Precise Data

- Advanced pressure detection technology, using world renowned components for data stability which is not affected by ambient environment.
- Advanced microflow automatic flow control technology that can accurately simulate different sizes of leakage holes without manual adjustment.
- Both the differential pressure transducer and flow meter are traceable to NIST.
- The system can achieve a higher test repeatability of  $\pm 1\mu\text{m}$ .

### Intelligent Control

- 12.1" industrial grade touch screen, tile-based operation interface.
- Pressure curves are displayed in real time, and test results are counted automatically.

- Leakage amount is calculated automatically.
- Automatic data storage and automatic memory during power loss.
- Micro-printer and USB data interface (optional).

### Security Compliance

- Verified by compensation and calibration methods.
- Multi-level management for user operation permission.
- Meet the GMP requirements for data traceability and meet the needs of the pharmaceutical industry (optional).
- Electronic signature is designed according to standard requirements of 21 CFR Part11 (optional)

### Test Principle

The sample is sealed in the test cell, and the sealed test cell is evacuated to analyze the pressure change measured by the sensor to calculate the leakage rate of the sample.

### Reference Standards

ASTM F2338, YY-T 0681.18 and USP<1207>

### Applications

|                       |                  |  |
|-----------------------|------------------|--|
| Basic                 | Vials            | Various vial sealing tests.  |
| Applications          | Food Packaging   | All kinds of food packaging bottles, tubes, cans, box sealing tests. |
| Extended Applications | Ampoule          | Various ampoule bottle sealing tests.                                |
|                       | Cartridge Bottle | Various cartridge bottle sealing tests.                              |
|                       | Injection Bottle | Various injection bottles sealing tests.                             |

### Technical Parameters

**Table 1: Test Parameters Note 2**

| Parameter \ Model |                                      | C690B             |
|-------------------|--------------------------------------|-------------------|
| Test Range        | Um (reference aperture size USP1207) | 3~8~great leakage |

|                       |                                  |          |
|-----------------------|----------------------------------|----------|
| Detection lower limit | um                               | $\leq 3$ |
| Resolution            | um                               | 0.1      |
| Repeatability         | um                               | $\pm 1$  |
| Pressure Range        | kPa                              | -100~0   |
| Extended Functions    | 21 CFR Part11                    | Optional |
|                       | GMP computer system requirements | Optional |

**Table 2: Technical Specifications**

|                     |   |
|---------------------|---|
| Test Cell           | 1 set   |
| Sample Size         | $\leq \Phi 45 \text{ mm} \times 80 \text{ mm}$ <sup>Note 3</sup>          |
| Sample Quantity     | 1 piece   |
| Gas Specifications  | Compressed Air (Gas source is provided by the user)                       |
| Gas Source Pressure | $\geq 40.6 \text{ PSI} / 500 \text{ kPa}$                                 |
| Port Size           | $\Phi 6 \text{ mm}$ Polyurethane tube                                     |
| Dimensions          | 10" H x 13" W x 17" D (25cm x 33cm x 44cm)                                |
| Power               | 120VAC $\pm 10\%$ 60Hz / 220VAC $\pm 10\%$ 50Hz (select one from the two) |
| Net Weight          | 22Lbs (10kg)  |

**Table 3: Product Configuration**

|                        |  |
|------------------------|--|
| Standard Configuration | Mainframe, software, flow meter, vacuum pump, $\Phi 6 \text{ mm}$ polyurethane tube  |
| Customization          | Test cell, negative standard reference sample and positive standard reference sample are designed according to the sample specifications |
| Optional Parts         | Computer, GMP computer system requirements, 21 CFR Part11, air compressor, IQ/OQ/PQ documents  |

**Note 1: The described product characteristics are subject to the specific annotation of the "Technical Parameters" table.**

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**Note 2: The parameters in the table are measured in the Labthink laboratory by professional operators according to the requirements and conditions of the relevant laboratory environmental standards.**

**Note 3: This sample dimension can be customized, but the lower detection limit and test range will change according to the sample size subject to the actual delivery.**