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Analysis & Testing Instruments



Intelligent Sealing Performance Tester

AUTO GBM-D1



Introduction

AUTO GBM-D1 intelligent sealing performance tester uses the working principle of pressurizing the sample to test the sealing strength and integrity of the packaging material. It is suitable for food and pharmaceutical packaging materials such as soft packaging, semi-plastic packaging, and full-plastic packaging. There are multiple test modes to comprehensively evaluate the leak-tightness and integrity of packaging materials. It has wide applicability, complete functions and accessories, and complies with applicable ASTM, ISO and GB standards. At the same time, our company provides matching accessories and services for different samples.

Test principle

The sample is tested for the air tightness of the package by means of damaging air pressurization (pressurized to burst or pressurized to the specified pressure). The test methods can be implemented according to different standards, such as burst test, leak test, creep test, bubble test test. The test result can be expressed in a combination of test pressure, holding time, test package position, leak position, etc.

Standard

ASTM F1140 Burst and Creep of Flexible Barrier Packaging (Unconfined);

ASTM F2054 burst test (with limit plate);

ASTM F2095 pressure decay leak test (unrestrained or with restraint plate);

ASTM F2096 bubble leak test (with water tank);

ISO 11607 Packaging for terminally sterilized medical devices

YY/T 0681.3 Test methods for sterile medical device packaging - Part 3: Unrestrained packaging against internal pressure damage

YY/T 0681.5 Test methods for sterile medical device packaging - Part 5: Internal pressure method for detection of gross leaks (bubble method)

YY/T 0681.9 Test methods for sterile medical device packaging - Part 9: Seal burst test of

flexible packaging by internal air pressure method of restraining plate

Test method

Burst test: The instrument keeps increasing the pressure on the package until the package bursts. (conforming to ASTM F1140, ASTM F2054, YY/T 0681.3, YY/T 0681.9 standards);

Leakage test: After the package is inflated to reach a preset pressure, and maintain the required test time under this pressure, the pressure management and leak test are carried out according to the standard, and the test conditions of unconstrained or restricted plate can be selected. (conforming to ASTM F2095, ISO 11607-1 standards);

Creep test: A constant pressure is generated in the package, close to the burst limit, and maintained for a certain period of time, and the sealing performance is evaluated when the pressure is applied within the set time. Optional test modes: creep and creep to failure (conforming to ASTM F1140, YY/T 0681.3 standards);

Bubble test: put the package in water, then pressurize the package to a predetermined pressure, and maintain the predetermined pressure for a preset time (in accordance with ASTM F2096, YY/T 0681.5 standards).

Specification

Item	Technical parameters
Test range	0.1 Kpa~1 Mpa
Resolution	0.1 Kpa
Test accuracy	± 0.5%FS
Testing time	1~1000 s
Test type	Burst, leak, creep, bubble method
Type of packaging	Soft package, semi-plastic package, all-plastic package
Air pressure	0.5 Mpa~0.9 Mpa
Dimensions	400 mm × 415 mm × 272 mm

Power supply	220V 50Hz
Power	150W

Features

- ◆ Positive pressure design principle, simple operation, stable and reliable performance;
- ◆ Double test method of expansion inhibition and expansion non-inhibition;
- ◆ Rupture test, creep test, creep-to-rupture test, multiple test modes to choose from;
- ◆ ‘One-key’ operation in the test process, intelligent and high test efficiency;
- ◆ The host is embedded with a 7-inch high-resolution color LCD screen, with clear views, sensitive point control, and easy operation;
- ◆ Test accessory support, flexible test mode, compatibility and diversification;
- ◆ The test range is optional and the test range is wide and the application field is wide;
- ◆ User graded permission setting, meeting GMP requirements, test record auditing, and tracking functions.

Application

Basic application	Plastic Composite Bag	It is suitable for the pressure rupture test of various plastic films, aluminum films, paper-plastic composites, aluminum-plastic composites and other packaging bags
	Hose test	It is suitable for packaging hoses of various cleaning products and other fields. The hose can include toothpaste tubes, facial cleanser, cosmetics, various medicinal ointment tubes, food packaging tubes, and the like.
	Creep test	Applicable to the creep performance test of various packaging bags, boxes, etc.

	Creep to rupture	Suitable for performance testing from creep to rupture of various packaging bags, boxes, etc.
Other application	Blister Pack Burst Test	Suitable for pressure test of various blister packs
	Aerosol Valve Test	It is suitable for testing the sealing performance of various aerosol valves. Aerosol valves include various insecticides, mousses, jelly water, medicinal sprays, self-spray paints, etc.
	Three-sided heat-sealing material	It is suitable for the pressure test where only three sides of the packaging bag are heat-sealed and one side is open
	High-pressure test	The test pressure can reach up to 1.6 MPa
	Anti-theft bottle cap	It is suitable for the sealing performance test of various anti-theft bottle caps. Anti-theft bottle caps can include cola bottle caps, mineral water purified water bottle caps, beverage bottle caps, vegetable oil barrel caps, non-staple food condiment caps (soy sauce, vinegar, cooking wine, etc.), easy-open three-piece cans (beer, beverage cans, etc.) , paper packaging cans (cylindrical, various potato chips and shrimp crackers), etc.

Factory configuration

Standard configuration	Host, open inflatable fixture (unconstrained), pinhole fixture (unconstrained)
Optional	Limiting plate (open inflatable fixture), limiting plate (pinhole fixture), bubble method fixture, air compressor, measurement certificate, computer

Note: GBPI has always been committed to the innovation and improvement of product performance and function. For this reason, product technical specifications and appearance will also be changed accordingly. The above situation will not be notified. GBPI reserves the right of modification and final interpretation.



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