VAC-V1

Gas Permeability Tester

This tester is applicable in gas permeability test of all kinds of flexible packaging materials such as films, foils, complex films, leatheroid and other plastic filmy materials.

Principle

Put a preconditioned specimen between upper and lower chambers and clamp it tightly. Firstly apply vacuum to the low-pressure chamber (lower chamber) and then the whole system.
When the specified degree of vacuum is reached, shut off the lower test chamber and feed test gas of certain pressure to the upper test chamber (high pressure chamber). Ensure that a constant differential pressure (adjustable) is maintained across the specimen. Hence under the gradient of differential pressure the test gas permeates from the high-pressure side to the low-pressure side. By monitoring and measuring the pressure in the low-pressure side we can get various barrier parameters of the tested specimen.

Features

- Differential-pressure principle compatible with relative ISO and ASTM standards
- World-famous high precision vacuum sensor ensuring test accurate data
- World-famous brand elements with stable and reliable performance
- Optional dual test modes: conventional and non-standard
- Super powerful software support, automatically calculates diffusion coefficient, solubility coefficient and permeability coefficient
- World original design - curve-fitting methodology for predicting diffusion coefficient, solubility coefficient and permeability coefficient at any temperature
- Intelligent parameter set and test operation; automatisation of the whole test process
- Satisfactory data repeatability and small margin for personal error
- Blank test with little systematic error; general performance exceeds similar products throughout the world.
- Whole test process monitored and controlled by server, round-the-clock running with high efficiency

Physical specifications

Dimensions
680 × 565 × 550 mm (L x B xH)

Net Weight
130 kg

Standards

GB 1038, ASTM D1434, ISO 2556, ISO 15105-1

Recommended applications

Research institutes, national legal inspection authorities and any social enterprise that has strict requirements to product process and technical index.

Standard configuration

Mainframe, software, sample cutter, BOC vacuum pump.
Note: compressed air provided by customers.

Technical data

Test range
0.02 ~ 100,000 cm^3/m^2 •24h • 0.1 MPa
(normal volume)
Not less than 600,000 cm^3/m^2 • 24h • 0.1 MPa
(expansion volume)
Note: normal and expansion would be chosen by software

Working temperature
5 - 50 °C
(temperature control range: room temperature - 50°C)

Resolution
0.1 Pa

Test gas
O_2 , N_2 , CO_2 and other nontoxic and non-corrosive gases

Test pressure
-0.1 MPa - 0.1 MPa

Gas supply pressure
0.6 MPa ≤ P ≤ 0.8 MPa

Specimen size
Φ 97mm, transmission area 38.46 cm^2
(70mm in diameter)

Power
AC 220 V, 50 Hz

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