

GPT-01 Differential Pressure Method Oxygen Transmission Rate Tester

Based on the testing principle of differential pressure method, the Differential Pressure Method Oxygen Transmission Rate Tester is a professional gas permeability tester for thin film samples. It is suitable for the measurement of gas permeability, solubility coefficient, diffusion coefficient and permeability coefficient of plastic film, composite film, high barrier material, sheet, metal foil, rubber, tire air tightness, permeation membrane at various temperatures.



Professional technology

- The instrument can simultaneously measure the gas permeability, solubility coefficient and diffusion coefficient of the sample.
- Wide range, high precision temperature and humidity control, meet the test under various test conditions.
- It provides the judgment mode of proportion and fuzzy dual test process.
- The test range can be extended according to the need to meet the requirements of high transmittance testing.
- Data fitting can be carried out at any temperature, and the test results under extreme conditions can be easily obtained.
- Support the testing of toxic gas, flammable and explosive gas (need to be customized).
- The system is controlled by computer and the whole test process is completed automatically.
- Provide standard membrane for rapid calibration to ensure the accuracy and versatility of test data.
- Equipped with USB universal data interface, convenient data transfer.

Rich application

Basic application	Film	It is suitable for testing O ₂ , N ₂ and CO ₂ gas permeability of various plastic films, plastic composite films, paper plastic composite films, geomembranes, coextrusion films, waterproof and breathable films, aluminized films, aluminum foils, aluminum foil composite films, etc
	Sheet	It is suitable for testing O ₂ , N ₂ , CO ₂ and other gas permeability of various engineering plastics, rubber, building materials (waterproof materials for building), thermal insulation materials and other sheet materials. Such as PP sheet, PVC sheet, PVDC sheet, nylon sheet, etc
	Paper, cardboard	It is suitable for testing the permeability of O ₂ , N ₂ , CO ₂ of paper and paperboard
	Textiles non-woven fabrics	It is suitable for testing the permeability of O ₂ , N ₂ and CO ₂ of textiles and non-woven fabrics

Testing principle

GPT-01 adopts the principle of differential pressure method. The pretreated sample is placed between the upper and lower test chambers and clamped. First, vacuum the low-pressure chamber (lower chamber), and then vacuum the whole system; when the specified vacuum degree is reached, close the test lower chamber, fill the high-pressure chamber (upper chamber) with test gas of certain pressure, and ensure that a constant pressure difference (adjustable) is formed on both sides of the sample. In this way, the gas will penetrate from the high pressure side to the low-pressure side under the effect of pressure gradient. Through monitoring the pressure in the low pressure side, the barrier parameters of the sample are obtained.

The instrument meets many national and international standards : ISO 15105-1, ISO 2556, GB/T 1038-2000, ASTM D1434, JIS K7126-1, YBB 00082003.

Technical index

Item \ Model	Differential Pressure Method Oxygen Transmission Rate Tester
Test range	0.1~100,000 cm ³ /m ² ·24h·0.1MPa (Conventional)
	Upper limit not less than 600,000 cm ³ /m ² ·24h·0.1MPa (Expanded volume)
Sample quantity	1 Piece
Vacuum resolution	0.1 Pa
Vacuum of test chamber	<20 Pa
Temperature control range	Room temperature 23℃ (Optional temperature control)
Temperature control accuracy	±0.1℃ (Conventional)
Test humidity	0%RH, 2%RH~98.5%RH, 100%RH. Humidity generating device separately
Humidity control accuracy	±1%RH
Sample size	Φ97 mm
Test gas	Oxygen, nitrogen, air, carbon dioxide, etc (Gas source provided by users)
Test pressure	-0.1 MPa~+0.1 MPa
Air source pressure	0.4 MPa ~ 0.6 MPa
Interface size	Φ6mm Polyurethane pipe
Size	420 mm (L) × 450 mm (W) × 450 mm (H)
Power supply	AC220V 50Hz
Weight	75kg

Product configuration

Standard configuration	Host, professional software, special sampler, vacuum grease, fast quantitative filter paper, vacuum pump.
Optional	Temperature control device, humidity generating device, computer, sampling blade, vacuum grease, vacuum pump oil.
Note	The air source inlet of the machine is Φ 6 mm polyurethane pipe; the air source and distilled water are provided by users

FAQ

1.Are you a manufacturer or a trading company ?

A: We are a professional manufacturer of test instruments. And we have our own subsidiary company for trading. All the import and export business will be handled by our own trading company.

2.Where is your factory located ? How can I visit there ?

A: Our factory is located in Jinan City, Shandong Province, about 1.5 hours by train from Beijing.

3.How to support me if i don't know how to use it?

A: Free training within the warranty by tel and mail or skype. And we have professional operation manual and operation video. We also can let our technician to customer's company to provide training and support if customer request.

4.If machines wearing parts need changing, what should we do?

A: We can offer the wearing parts all the time, and offer video to show how to change it.