



Gas Permeability Tester - GPT-500

ASTM D1434, ISO 2556, ISO 15105-1

Applications

GPT-500 Gas Permeability Tester is designed to test the gas transmission rate (GTR) of packaging material by differential pressure method. It can be used to test O₂, CO₂, and N₂ etc. gas transmission rate.

GPT-500 widely applicable in food industry, pharmaceutical industry, cosmetics flexible packaging materials industry for gas permeability testing of plastic film, composite films, barrier materials, sheets, metal aluminum foils, thin sheets, rubber, porcelain, infusion bags, solar pane, PVC sheets or medical patch. It can also be used to measure permeability of gas through finished container with optional adaptors for bottles, bags, pouches, bowl, box, can, etc. based on their size and shapes.



ASTM D1434 Standard Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting, covers the estimation of the steady-state rate of transmission of a gas through plastics in the form of film, sheeting, laminates, and plastic-coated papers or fabrics. This test method provides for the determination of (1) gas transmission rate (GTR), (2) permeance, and, in the case of homogeneous materials, (3) permeability.

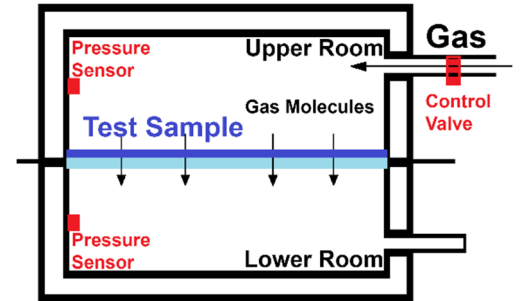
Features

- Advanced electromagnetic temperature control technology, program controlled, precision 0.01 °C.
- Wide range of application - It can test high barrier material for instance aluminum foil, ceramic etc. and low barrier material like plastic films.
- Superior components, accurate test result, high stability of results;
- Automatic pressure control and maintenance free design makes it easy to operate and user friendly.
- Unique chamber and gas flow design, specialized sensor, high precision and stability.
- Built-in advanced ARM control system, machine can run without a computer.
- Touch screen control.
- Applicable to high barrier material and low barrier material; can be used to test aluminum foil.
- Real time display of transmission rate, pressure, pressure difference and temperature.
- Simple software interface, easy to use, data and report saved automatically, graph could be printed.
- Multiple safety protection including over pressure protection.
- Standard film calibration and pressure calibration.
- Excellent hermetic sealing of test chamber, machine is able to test ceramics and porcelain.

Working Principle

Differential-pressure method. A test sample is fixed in the middle of test chamber to separate chamber into upper room and lower room, between which keeps a constant pressure difference.

The initial pressure for the upper and lower room are 100Kpa and 10Pa respectively. Gas molecules would penetrate through sample from higher pressure room into lower pressure room. Gas permeability is measured by detect the pressure change in lower pressure room and calculate gas transmission rate.



Technical Specifications

Model	GPT-500
Chamber Qty.	1
Test Gas	O ₂ , CO ₂ , N ₂ etc.
Test Range	0.02 ~ 50000 cm ³ /(m ² · 24h · 0.1MPa)
Test Pressure	±0.1MPa
Test Accuracy	0.01 cm ³ /(m ² ·24h·0.1MPa)
Test Area	50.24cm ²
Temperature Range	15 ~ 35°C
Temperature Accuracy	± 0.01°C
Humidity range	0%RH
Humidity accuracy	±2%RH
Vacuum degree	<10Pa
Vacuum resolution	0.1 Pa
Sample Size	Φ110mm
Sample Thickness	≤ 2mm
Sample Qty.	1 piece
Gas Source	Test gas, purity 99.999% N ₂ ,0.2 to 0.8MPa
Gas Source Pressure	0.2 to 0.8MPa
Gas Port	Φ6mm gas pipe
Dimensions	680 × 560 × 340mm
Weight	70kg
Standard Configuration	<ul style="list-style-type: none"> ▪ GPT-500 Gas Permeability Tester 1 set ▪ Power cable 1 pc ▪ RS 232 communication cable 1 pc ▪ 10mm Allen wrench 1 pcs ▪ Sample cutter 1 pc ▪ Rubber pipe 6m ▪ Ferrule connector 2 pcs ▪ Sealing grease 1 pc ▪ Filter paper 3 pcs ▪ Cross screwdriver 1 pc ▪ Pressure releasing valve 1 pc ▪ Standard film 1 box (6 pcs) ▪ Screwed joint 1 pc ▪ Sealing Ring 6 pcs ▪ Vacuum pump 1 pc ▪ Mouse 1 pc ▪ User manual and operation regulations

Please Note

Oakland Instrument is always dedicated to the innovation and improvement of product performance and function. Therefore, technical specifications are subject to change without further notice. Please visit our website at www.oaklandinstrument.com for the latest updates. Oakland Instrument reserves the rights of final interpretation and revision

Note : Prices for accessories are valid only when ordered with the main unit
Prices : Ex Works Minneapolis, MN USA /
or nearest Distribution Center – depending upon availability
Delivery : Approx. 5 - 6 weeks depending on stock availability
Warranty : 12 months limited

Ordering Information

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