HST-GTRM500 Gas Transmission Rate Meter

Image for reference only.

Instrument Introduction:

Designed based on the differential pressure method, this instrument can be used to detect the permeability of various gases such as O2, CO2, and N2 in various films, plastic sheets, plastic infusion bags, and paper-plastic packaging materials. It conforms to standards such as ISO 2556-2001, ISO15105-1, GB/T 1038-2000, ASTM D1434-82 (2003), and YBB00082003.

Features:

The GTRM500 gas permeameter is designed based on the differential pressure method. A pre-treated sample is placed between the high and low pressure test chambers and clamped. The entire test system is then vacuumed. Test gas is introduced into the high-pressure chamber, while the lower chamber is kept vacuumed to ensure a constant pressure difference across the sample. Under the influence of this pressure difference, the gas permeates from the high-pressure chamber through the membrane to the low-pressure chamber. Monitoring the pressure change in the low-pressure chamber allows for the calculation of the barrier parameters of the tested sample. The above describes the negative pressure mode. The principle of the differential pressure method is to maintain a constant pressure difference across the film throughout the testing process to measure transmittance. Therefore, maintaining a constant pressure difference is crucial. The AT-500N is the only domestic model that meets national standards and can maintain a constant pressure difference of one atmosphere. The AT-500N also features a positive pressure testing mode. It is used for testing the transmittance of various gases such as O2, CO2, and N2 in various films, infusion bags, and other

packaging materials.

Product Features:

Computer-controlled, it can automatically complete the entire testing process. It is simple to operate and convenient to use. It has precise temperature control capabilities, simulating the product's conditions in real-world environments, meeting the needs of testing and evaluating the gas permeability of plastic films under special application conditions such as high and low temperatures. It displays four sets of curves for each chamber: transmittance, pressure, temperature, and differential pressure. It automatically judges, automatically stops, and automatically saves test curve reports. It can print transmittance and other parameter curves.

Technical Parameters:

1. Measurement Range: 0.02~50000 $cm^3/m^2 \cdot day \cdot 0.1MPa$
2. Measurement Accuracy: 0.01 $cm^3/m^2 \cdot day \cdot 0.1MPa$
3. Temperature Range: 5℃~50℃
4. Temperature Control Accuracy: ±0.01℃
5. Vacuum Accuracy: 0.1Pa
6. Test Chamber Vacuum: <20Pa
7. Test Pressure: -0.1MPa～+0.1 MPa
8. Gas Source Pressure: 0.1MPa～0.8 MPa
9. Test Gases: O2, CO2, N2
10. Carrier Gas Interface: 1/8 inch
11. Sample Quantity: 1 piece
12. Sample Thickness: ≤2mm
13. Sample Area: $50cm^2$

Configuration:

One main unit, one computer, one set of testing software, one sample cutter, one vacuum pump, 5m of 1/8 inch copper tubing, one pressure reducing valve

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