

## N500 Gas Permeability Analyzer



### Application

N500 gas permeability analyzer is to test the gas (O<sub>2</sub>, N<sub>2</sub>, CO<sub>2</sub> etc) transmission rate (GTR) of packaging materials, films and sheets materials.

### Applied to:

- 1) Plastic film, composite film, aluminum foil, aluminized film, etc;
- 2) Sheet, panel, rubber, ceramics, etc;
- 3) Packaging containers, such as: glass, bottle, cans, boxes, etc;
- 4) Expanding application: solar panel, LCD film, contact lenses, medical patch, etc.

Widely used in quality inspection organizations, drug control institutions, research institutes, packaging, thin film, food companies, pharmaceutical enterprises, personal care industry, electronics industry and so on.

### Standard

GB/T 1038-2000, ISO 2556-1974, ISO 15105-1-2007, ASTM D1434, YBB 00082003-2015, JIS K7126-1-2006

## Specification

Item	Technical parameters
Testing range	0.02~50000 cm <sup>3</sup> / (m <sup>2</sup> ·24h·0.1MPa) Max possibility by expanding the volume: 600000 cm <sup>3</sup> / (m <sup>2</sup> ·24h·0.1MPa)
Test accuracy	0.001 cm <sup>3</sup> / (m <sup>2</sup> ·24h·0.1MPa)
Temperature range	15~60°C
Temperature accuracy	±0.1°C
Vacuum degree	<20Pa
Vacuum resolution	0.01Pa
Test pressure	-0.1~+0.1MPa
Gas supply pressure	0.2~0.8MPa
Gas port	1/8 inch rubber tube
Test gas	O <sub>2</sub> , CO <sub>2</sub> , N <sub>2</sub> , etc
Test area	50.24 cm <sup>2</sup>
Sample size	Φ110 mm
Sample thickness	≤2mm
Instrument size	1 PC
Instrument size	680mm×560 mm×340mm
Weight	70kg
Power	1000W
Power supply	AC 220V, 50Hz

## Features

### ➤ Accurate and reliable data

- ◆ With *The State Certificate for Gradation of the certified Reference Materials* and Licence for Manufacturing Measuring Instruments of *the state*

*Reference Materials* ( GBW(E)130541/2 ) of Gas Permeability Analyzer approved and issued by General Administration of Quality Supervision, Inspection and Quarantine of the P.R.C. Adopting state reference materials to calibrate and verify the instruments, ensure the accuracy, universality and authority of the test data.

#### ➤ Simple operation

- ◆ Professional software with simple interface, easy to use and convenient to set test process.
- ◆ Fully-auto operation, one-button test, judge and stop automatically.
- ◆ Programmed auto-control, the experiment status display in real time.
- ◆ Curves display of transmission, water vapor concentration, temperature and humidity in real time. The curves with conceal function, support query function for background data.
- ◆ Mainframe configure with color touch screen, can observe temperature, humidity and transmission without external computer.
- ◆ Professional test report; can be exported as PDF.

#### ➤ Advanced technology

- ◆ World's pioneered auto keep pressure difference technology, which can keep pressure difference of two sides of samples automatically (pressure can be adjusted) .
- ◆ **Temperature control:** International advanced electromagnetic technology, program controlled, automatic temperature rise and fall. Precision 0.01°C.
- ◆ Carrying cutting-edge ARM controlling system, can run independently without computer.

### ➤ High efficiency

- ◆ One independent test chamber with an independent main sensor.
- ◆ With three different test modes of high, medium and lower barriers, can test films with different barrier property.
- ◆ Measurement precise up to  $0.01 \text{ cm}^3 / (\text{m}^2 \cdot 24\text{h} \cdot 0.1\text{MPa})$  , can test high barrier materials, such as aluminum foil.
- ◆ By adding package-testing accessories, can test gas transmission of various containers such as bag, bottle, can and bowl.
- ◆ Can expand upper limit of test range to  $600000 \text{ cm}^3 / (\text{m}^2 \cdot 24\text{h} \cdot 0.1\text{MPa})$  .

### ➤ Calibration & Certification

- ◆ The instrument supports two methods of reference materials and standard gas to certificate and calibrate; Operation is simple, user only need use certified reference materials for normal testing, and then input the test result into the instrument interface to complete calibration.

### ➤ Reliable and easy-maintenance instrument

- ◆ Imported pressure sensor, with high precise and good performance, can work for a long time.
- ◆ Sensor over-range auto protection.
- ◆ Function modularization, easy to maintain.

## Configuration List

### A、 Spare parts

NO.	Name	Remark	Quantity
1	Power cable	3*0.75 10A 1.8M	1 PC
2	Communication cable	RS232nine-pin data cable	1 PC
3	Special spanner	10mm Allen wrench	1 PC
4	Sample cutter	Sample diameter 110mm(Tly-0.01)	1 PC
5	Rubber pipe	PU-Φ6*Φ4 blue	6 M
6	Gas connector	MC-01-01NPT 1/8	1 PC
7	Gas connector	MC-01-02 NPT 1/4	1 PC
8	Sealing grease	HFV-GS(HFV-GS 70g)	1 PC
9	Qualitative filter paper	Meddle speed Φ9.0MM	3 PCS
10	Cross screwdriver	6-10mm	1 PC
11	Reference material	125μm	1 box
12	Screwed joint	APC6-02	1 PC
13	Sealing circle	φ12	2 PCS
14	Mouse	RAPOO M10	1 PC
15	Wooden box		1 PC

#### B、 Optional parts

NO.	Name	Unit	Quantity	Remark
1	Computer			Optional
2	Metrology Certificates			Optional
3	Leybold vacuum pump	SV16B(import ed) optional	1 set	
4	Pressure releasing valve	YQY-07(M860/ 861)(optional)	1 PC	

#### C、 User provide

1	Laboratory requirements: ordinary laboratory with air conditioner, temperature stable at 23°±2
2	Experiment table requirements: table size length 200cm*width 80cm*height 80cm
3	Power supply: 220V 1 piece of three-hole switch socket with three-position, 10A
4	Computer requirements: standard configuration (Windows7 with nine-pin serial port)
5	Experimenter requirements:1-3 test operators with secondary vocational education or above, with equivalent computer knowledge.
6	Drying vessel (all samples must be degassed and dehydrated for 24 hours);
7	Other accessories: for calibration: 1 bottle of oxygen(purity above 99.999%), other gases are optional.

Note: GBPI is always committed to product innovation and improved performance, so accordingly product technical specifications are subject to change without notice. GBPI reserves the right to amend and the final power of interpretation.