

Professional

This instrument is based on the combination of differential pressure method and chromatography analysis technology. It is the only instrument in the market so far that provides the quantitative and qualitative analysis of gas permeability of sole gas or mixed gas in separation membranes.

- Automatic temperature control system gives heating and cooling functions that tests can be carried out at any temperature within the given range
- Top quality parts and components made by world famous brands are used to ensure reliable overall product performance
- All test parameters can be set flexibly for convenient operation
- Wide range of power input ensures the instrument working regularly at various conditions



High-end

G2/110 system utilizes Labthink's latest embedded computer control system that provides a better performance than traditional single chip system.

- Embedded computer control system provides safer and more reliable data management as well as test operation
- The system can be easily operated by a standard monitor, a keyboard and a mouse; without requiring a PC.
- The system is equipped with four USB ports and dual Internet ports for convenient input, output, and data transfer

Intelligent

The instrument is equipped with Labthink's latest intelligent operating software, with user-friendly operating interface and intelligent data management. It also supports Lystem[™] Lab Data Sharing System, which ensures uniform management of test results and test reports.

- Status monitoring and intelligent reminding of sensor calibration ensure instrument in the best working condition
- The system automatically calculates the statistical information of instrument utilization rate and effective test times
- Embedded help document for user viewing at any time
- Multi-level account control for better data management and protection
- The system utilizes embedded data saving technology to save detailed information and give convenient and various searching and viewing functions
- One time value input and the system automatically gives data comparison after each test
- Support Lystem[™] Lab Data Sharing System for uniform and systematic data management

Test Principle

The pre-conditioned specimen is mounted in the gas diffusion cell as to form a sealed barrier between two chambers. The lower-pressure chamber is firstly evacuated, followed by the evacuation of the entire cell. A flow of gas is thereafter introduced into the evacuated higher-pressure chamber and a constant pressure difference is generated between the two chambers. The gas permeates through the specimen from higher pressure side into the lower side and is further detected by gas chromatograph. The permeance, selectivity and transmission rate in separation membranes can be obtained by the application of chromatography analysis technology.

Applications

This instrument is applicable to the determination of:

Permeance	Test the permeance of separation membranes to various components of sole gas or mixed gas under a certain condition
Selectivity	Test the selectivity of separation membranes to various components of mixed gas under a certain condition
Transmission Rate	Test the transmission rate of separation membranes to various components of sole gas or mixed gas under a certain condition

Technical Specifications

Specifications	Film Test
Test Range	$10^{-5} \sim 10^{-14} \text{cm}^3(\text{S.T.P})$ film thickness/cm ² Sec cmHg
Test Method	TCD sensor and Chromatographic standard curve method
Test Sensitivity	More than 3000mV·mL/mg (for H ₂ and benzene)
Specimen Thickness	< 1 mm
Test Area	3.14cm ² (φ20 mm)
Temperature Range of Test Chamber	15 °C ~ 55 °C
Accuracy	±0.1 °C
Temperature Range of Test Gas Pipeline	(Room temperature+5) °C ~ 100 °C
Accuracy	±0.1 °C
Test Gas	Test gas could be one of air, O ₂ , N ₂ , CO, CO ₂ and CH ₄ or their mixed gas (customization is available for other test gases ; gas resource is outside of supply scope)
Differential Pressure of Test Gas	-0.1 MPa~ +0.1 MPa
Vacuum Degree	< 20 Pa
Carrier Gas	Helium
Carrier Gas Pressure	0~ 0.5 MPa
Instrument Dimension	690 mm (L) x 350 mm (W) x 380 mm (H)
Power Supply	AC (85~ 264)V (47~ 63)Hz
Gas Chromatograph Power	2500 W
Net Weight	67 kg

Configurations

Standard Configurations	Mainframe, Professional Software, Standard LCD Monitor, Keyboard, Mouse, Gas Chromatograph, Chromatographic Column, Chromatography Data System, Vacuum Grease, Fast Quantitative Filter Paper and Vacuum Pump
Optional Parts	Chromatographic Column, Vacuum Grease, Vacuum Pump Oil, Fast Quantitative Filter Paper, Specimen Mask, Lystem [™] Lab Data Sharing System and Printer (compatible with PCL3)
Note	<ol style="list-style-type: none">1. The gas supply ports of the instrument are $\Phi 6$ mm PU tubing and 1/8 inch copper tubing;2. Customers will need to prepare for gas supply.

Please Note: Labthink 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.labthinkinternational.com.cn for the latest updates. Labthink reserves the rights of final interpretation and revision.