Labthink Instruments Co., Ltd.

MATERIAL TESTING INSTRUMENTS

Labthink®

济南兰光机电技术有限公司

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MATERIAL TESTING INSTRUMENTS

Introduction

Labthink is a multinational technology company that is devoted to helping customers succeed, employees grow and brands gain respect. The headquarters of Labthink is in Jinan, China; its international headquarters is in Boston, USA; and its SAC IT Center is in Hong Kong, China. The company has more than 50 international distributors and more than 30 international service providers.

Labthink has three brands for its three business sectors: DIAMON represents testing instruments for flexible packaging and many other industries; CONVEN is for package testing services for food industry; and INNOMAX stands for solutions for new business mode for third-party laboratories.

Labthink has taken the lead in proposing and drafting more than 10 national standards and has been granted more than 100 patents. Those standards and patents range from property testing for plastics, transmission methods for original data generated in testing to business mode for third-party laboratories and many other advanced technological and business areas.

Business Scope

1） Materials Testing Instruments

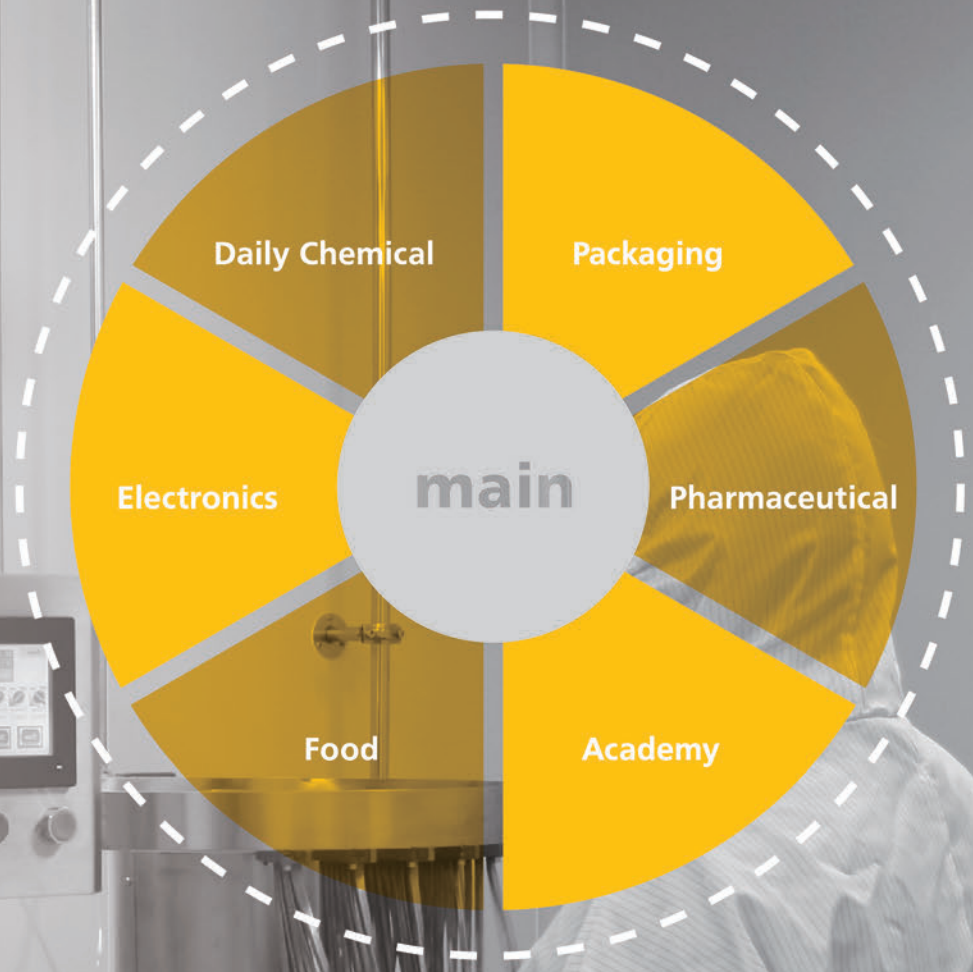
Labthink provides barrier property testers, such as water vapor transmission rate tester, oxygen transmission rate tester and gas permeability tester as well as other physical property testers, such as tensile tester, thickness tester, coefficient of friction tester, which are used for films, foils and other flexible packaging materials.

2） Commercial Testing Services

Packaging material Testing for barrier property and other physical properties

3） LIMS, Laboratory Information Management System

Applied Industry



Others

Glue	Adhesives		Automotive		Building Industry
	Cigarette		Green Energy		Petrochemical

FEATURED PRODUCTS

C230G/C230H Oxygen Transmission Rate Test System

C230G/C230H Oxygen Transmission Rate Test System is designed and manufactured based on the coulometric sensor method (aka. equal pressure method) and conforms to ASTM D3985. This instrument can be used to measure the oxygen transmission rate of barrier materials with high and medium barrier properties with high accuracy and high efficiency. The instrument features Labthink's patented design of integrated test block consisting of three permeation cells. Equipped with a high precision coulometric sensor and Labthink's professional computer-controlled system, the instrument can regulate and control the temperature, humidity and flow rate precisely, guaranteeing high sensitivity and excellent repeatability of test results. C230G/C230H is applicable to the determination of oxygen permeability of plastic films, sheeting, paper, and other packaging materials used in food, pharmaceutical, medical apparatus, consumer products, photovoltaic and electronic industries, etc. Optional accessories extend the capability to testing complete packages and systems such as bottles, pouches, cartons, blister packs, tubes and more.

Equal Pressure Method

High Precision

- Patented integrated test block with advanced hydrodynamic and thermodynamic design.
- Labthink's proprietary thermostat technology ensures that the test block is precisely temperature controlled and remains stable throughout the test.
- Temperature and humidity sensor for independent monitoring of test cells.

High Efficiency

- Three identical specimens can be tested simultaneously, which meets the requirements for parallel test.
- Three distinct specimens can be tested under the same testing condition, delivering higher throughput while reducing the number of instruments required.

Labor Saving

- Automatic temperature and humidity control eliminate the need for operator monitoring and adjustment.
- Automatic flow rate control ensures constant flow during the testing process and minimizes any errors caused by an unstable flow rate.
- No need to verify the system using different reference film for different testing range.

Simplified Operation

- 12" touch-screen pad powered by Windows™ 10 operating system
- Fast automatic testing process
- Optional DataShield™ software and accessories for automatic data management

Specifications

Parameter		Model C230G	Model C230H
Test Range	$cm^3/(m^2 \cdot day)$ (Standard)	0.005~200	0.01~200
	$cc/(100in^2 \cdot day)$	0.0003~12.9	0.0007~12.9
	$cm^3/(pkg \cdot day)$ (Package)	0.000025~1	0.00005~1
Resolution	$cm^3/(m^2 \cdot day)$	0.0001	0.001
Repeatability	$cm^3/(m^2 \cdot day)$	0.005 or 2%	0.01 or 2%
Test Temperature	℃	10~55 ±0.2	10~55 ±0.2
Test Humidity	RH	0%, 5% ~ 90%±1%, 100%	0%, 5% ~ 90%±1%, 100%
Standards To Follow	ASTM D3985, ASTM F1307, ASTM F1927, GB/T 19789, GB/T 31354, DIN 53380-3, JIS K7126-2-B and YBB 00082003-2015		

FEATURED PRODUCTS

C230M/C230X Oxygen Transmission Rate Test System

C230M/C230X Oxygen Transmission Rate Test System is designed and manufactured based on the coulometric sensor method (aka. equal pressure method) and conforms to ASTM D3985, ASTM F2622 and ISO 15105-2. This instrument can be used to measure the oxygen transmission rate of barrier materials with high, and medium barrier properties with high accuracy and high efficiency. The instrument features Labthink's patented design of integrated test block consisting of three permeation cells. Equipped with a high precision coulometric sensor and Labthink's professional computer-controlled system, the instrument can regulate and control the temperature, humidity and flow rate precisely, guaranteeing high sensitivity and excellent repeatability of test results. C230M/C230X is applicable to the determination of oxygen permeability of plastic films, sheeting, paper, and other packaging materials used in food, pharmaceutical, medical apparatus, consumer products, photovoltaic and electronic industries, etc. Optional accessories extend the capability to testing complete packages and systems such as bottles, pouches, cartons, blister packs, tubes and more.

Equal Pressure Method

High Precision

- Patented integrated test block with advanced hydrodynamic and thermodynamic designs.
- Labthink's proprietary thermostat technology ensures that the test block is precisely temperature controlled and remains stable throughout the test.
- Temperature and humidity sensor for independent monitoring of test cells.

High Efficiency

- Three identical specimens can be tested simultaneously, which meets the requirements for parallel test.
- Three distinct specimens can be tested under the same testing condition, delivering higher throughput while reducing the number of instruments required.

Labor Saving

- Automatic temperature and humidity control eliminate the need for operator monitoring and adjustment.
- Automatic flow rate control ensures constant flow during the testing process and minimizes any errors caused by an unstable flow rate.
- No need to verify the system using different reference film for different testing range.

Simplified Operation

- 12" touch-screen pad powered by Windows™ 10 operating system
- Fast automatic testing process
- Optional DataShield™ software and accessories for automatic data management

Specifications

Parameter		Model C230M	Model C230X
Test Range	$cm^3/(m^2 \cdot day)$ (Standard)	0.01~5000	0.005~5000
	$cc/(100in^2 \cdot day)$	0.0007~322	0.0003~322
	$cm^3/(pkg \cdot day)$ (Package)	0.00005~25	0.000025~25
Resolution	$cm^3/(m^2 \cdot day)$	0.001	0.0001
Repeatability	$cm^3/(m^2 \cdot day)$	0.01 or 2%	0.005 or 2%
Test Temperature	℃	10~55 ±0.2	10~55 ±0.2
Test Humidity	RH	0%, 5% ~ 90%±1%, 100%	0%, 5% ~ 90%±1%, 100%
Standards To Follow	ISO 15105-2, ASTM D3985, ASTM F2622, ASTM F1307, ASTM F1927, DIN 53380-3, GB/T 19789, GB/T 31354, JIS K7126-B, YBB 00082003-2015		

FEATURED PRODUCTS

C330G/C330H Water Vapor Transmission Rate Test System

C330G/C330H Water Vapor Transmission Rate Test System, is designed and manufactured based on the electrolytic sensor method and conforms to the requirements of ISO 15106-3. This instrument can be used to measure the water vapor transmission rate of barrier materials with high moisture barrier properties with a wide testing range and high testing efficiency. The instrument is featured with patented design of integrated block consisting of 3 test cells. Equipped with high precision sensors and professional computer-controlled system, the instrument can regulate and control the temperature, humidity and flow rate precisely, guaranteeing the testing sensitivity and repeatability of test results. C330G/C330H is applicable to determination of water vapor permeability of plastic films, sheeting, paper, packages and other relative packaging materials in food, pharmaceutical, medical apparatus, consumer goods, photovoltaic and electronic industries, etc.

Electrolytic Sensor Method

High Precision

- Labthink electrolytic sensor for water vapor analysis with higher sensitivity.
- Patented integrated test block with advanced hydrodynamic and thermodynamic design
- Temperature and humidity are accurately and automatically controlled throughout the test, eliminating the need for operator intervention or separate data-logging devices.
- Temperature and humidity sensor for independent monitoring of test cells.

High Efficiency

- Three identical specimens can be tested simultaneously, which meets the requirements for parallel test.
- Three distinct specimens can be tested under same testing condition, delivering higher throughput while reducing the number of instruments required.

Labor Saving

- Automatic temperature and humidity control eliminate the need for operator monitoring and adjustment.
- Automatic flow rate control ensures constant flow during the testing process and minimizes any errors caused by an unstable flow rate.
- No need to verify the system using different reference film for different testing range.

Simplified Operation

- 12" touch-screen pad powered by Windows™ 10 operating system
- Fast automatic testing process
- Optional DataShield™ software and accessories for automatic data management

Specifications

Parameter		Model C330G	Model C330H
Test Range	g/(m²·day) (Standard)	0.00005 ~ 5	0.005~50
	g/(100in²·day)	0.000003 ~ 0.3225	0.0003~3.223
	g/(pkg·day) (Package)	0.00000025 ~ 0.025	0.000025~0.25
Resolution	g/(m²·day)	0.00001	0.001
Repeatability	g/(m²·d)	/	0.005 or 2%
Test Temperature	℃	10 ~ 55 ±0.2	10 ~ 55 ±0.2
Test Humidity	RH	5% ~ 90% ±1%, 100%	5% ~ 90% ±1%, 100%
Standards To Follow	ISO 15106-3, GB/T 21529, YBB 00092003-2015		

NG INSTRUMENTS

FEATURED PRODUCTS

C360M/C360H Water Vapor Transmission Rate Test System

C360M/C360H Water Vapor Transmission Rate Test System, is designed and manufactured based on the gravimetric determination method and conforms to the requirements of ASTM E96. This instrument can be used to measure the water vapor transmission rate of barrier materials with high, medium and lower moisture barrier properties with a wide testing range and high testing efficiency. The instrument features Labthink's patented test chamber design with multiple test dishes. C360M/C360H is equipped with precision made test dishes, highly accurate balance, embedded professional software which supports automatic controlling of temperature, humidity and flow rate precisely and guarantees the testing sensitivity and repeatability of the test results. C360M/C360H is applicable to determination of water vapor permeability of plastic films, sheeting, paper, packages and other packaging materials in food, pharmaceutical, medical apparatus, building materials and consumer goods, etc.

Gravimetric Determination Method

High Precision

- Patented test chamber and test dishes with advanced fluid dynamics and thermodynamic designs.
- Labthink's proprietary thermostat technology ensures that the test chamber is precisely temperature controlled and remains stable throughout the test.
- Precise and scientific regulation and calculation of testing conditions.

High Efficiency

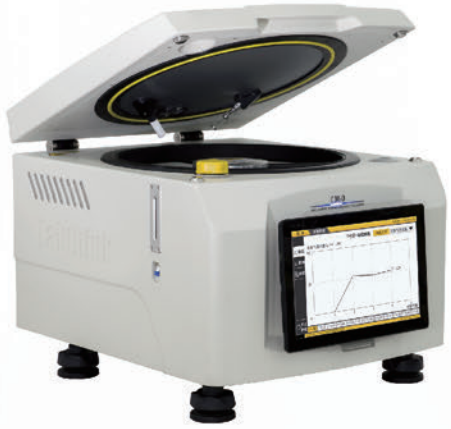
- 6 or 12 test stations.
- Supports test modes of desiccant method and water method.

Labor Saving

- Automatic humidity and flow rate controlling.
- Desiccator requires no replacement of inner core.
- High-efficiency water vapor generator.

Simplified Operation

- 12" touch-screen pad powered by Windows™ 10 system.
- Fast automatic testing process.
- DataShield™ for automatic data management.



Specifications

Parameter		Model C360M	Model C360H
Testing Efficiency	0.01g/(m²·day)~0.5g/(m²·day)	>24 hours	>24 hours
	0.0006g/(100in²·day)~0.0323g/(100in²·day)		
	0.5 g/(m²·day)~5 g/(m²·day)	12~24 hours	12~24 hours
	0.0323g/(100in²·day)~0.3225g/(100in²·day)		
	>5 g/(m²·day)	⩽8 hours	⩽12 hours
	>0.3225 g/(100in²·day)		
Max. Test Range	Water Method	10000/n (1-6) g/(m²·day)	10000/n (1-12) g/(m²·day)
		645/n (1-6) g/(100in²·day)	645/n (1-12) g/(100in²·day)
	Desiccant Method	1200g/(m²·day) per piece	1200g/(m²·day) per piece
		77g/(100in²·day) per piece	77g/(100in²·day) per piece
Test Station		6	12
Test Temperature	℃	20~55±0.2	20~55±0.2
Test Humidity	RH	10%~90%±1%	10%~90%±1%
Standards To Follow	ASTM E96, ASTM D1653, ISO 2528, TAPPI T464, DIN 53122-1, GB 1037, GB/T 16928, YBB 00092003-2015		

FEATURED PRODUCTS

C390H Water Vapor Transmission Rate Test System

C390H Water Vapor Transmission Rate Test System, is designed and manufactured based on infrared sensor method and conforms to the requirements of ISO 15106-2 and ASTM F1249. This instrument can be used to measure the water vapor transmission rate of barrier materials with high, and medium moisture barrier properties with a wide testing range and high testing efficiency. The instrument is featured with patented design of integrated block consisting of 3 test cells. Equipped with high precision sensors and professional computer-controlled system, the instrument can regulate and control the temperature, humidity and flow rate precisely, which guarantee the testing sensitivity and repeatability of test results. C390H is applicable to determination of water vapor permeability of plastic films, sheeting, paper, packages and other relative packaging materials in food, pharmaceutical, medical apparatus, consumer goods, photovoltaic and electronic industries, etc.

Infrared Sensor Method

High Precision

- New type infrared sensor for water vapor analysis with higher sensitivity.
- Patented integrated test block with advanced hydrodynamic and thermodynamic design
- Temperature and humidity are accurately and automatically controlled throughout the test, eliminating the need for operator intervention or separate data-logging devices.
- Temperature and humidity sensor for independent monitoring of test cells.

High Efficiency

- Three identical specimens can be tested simultaneously, which meets the requirements for parallel test.
- Three distinct specimens can be tested under same testing condition, delivering higher throughput while reducing the number of instruments required.

Labor Saving

- Automatic temperature and humidity control eliminate the need for operator monitoring and adjustment.

Simplified Operation

- 12" touch-screen pad powered by Windows™ 10 operating system
- Fast automatic testing process
- Optional DataShield™ software and accessories for automatic data management

Specifications

Parameter		Model C390H
Test Range	g/(m²·day) (Standard)	0.005 ~ 40
	g/(100in²·day)	0.0003 ~ 2.6
	g/(pkg·day) (Package)	0.000025 ~ 0.2
Resolution	g/(m²·day)	0.0001
Repeatability	g/(m²·d)	0.005 or 2%
Test Temperature	℃	10 ~ 55 ±0.2
Test Humidity	RH	5% ~ 90% ±1%, 100%
Standards To Follow	ISO 15106-2, ASTM F1249, GB/T 26253, JIS K7129, YBB 00092003-2015	

FEATURED PRODUCTS

C640 Thickness Tester

Mechanical Contact Method

Professional:

- The instrument conforms to standards for mechanical contact method. The pressure foot can be lifted and lowered automatically, which can minimize the errors caused by human operation
- Contacting time and test speed can be set as required. Customization is available for multiple contact areas and pressures, which can meet the requirements for various test conditions
- Manual and automatic test modes can be selected by the users
- Calibration of multiple points can improve the linearity of the whole test range, which ensures the accuracy of measured results.
- Standard gauge block is available for fast calibration

High Efficiency:

- Parameter program function enables the user to save all test parameters in a file so that those parameters can be applied directly for the same tests next time, which can help the user save time and minimize the error when inputting parameters manually
- Test results include maximum value, minimum value, average value and standard variation, which can be displayed to the user directly
- Result comparison function can help the user in evaluation of results
- Auto sampling function (optional), feeding space, feeding speed, measure points can be set as required

Intelligent:

- Test data can be displayed in various forms including curves and data list
- Test data will be saved and encrypted in a unique way so that all the test information will be saved securely and reliably and protected from being tampered
- Various forms of test data can be searched, exported and printed out
- The instrument meet the requirements of China's Good Manufacturing Practice (GMP) for computer system, which can be used in medical industry (optional configuration)
- The user privilege can be self-defined so that the operation of users with different privileges can be controlled (Optional configuration)

Specifications

Parameter \ Model		C640M	C640H
Test Range (Standard)	mm	0 ~ 2	0 ~ 2
Resolution	μm	0.1	0.1
Repeatability	μm	0.8	0.4
Test Range (Optional 1)	mm	0 ~ 6	0 ~ 6
Test Range (Optional 2)	mm	0 ~ 12	0 ~ 12
Standards To Follow	ISO 4593, ISO 534, ASTM D6988, ASTM F2251, GB/T 6672, GB/T 451.3, TAPPI T411, BS 2782-6, DIN 53370, ISO 3034, ISO 9073-2, ISO 12625-3, ISO 5084, ASTM D374, ASTM D1777, ASTM D3652, GB/T 6547, GB/T 24218.2, FEFCO No 3, EN 1942, JIS K6250, JIS K6783, JIS Z1702		

FEATURED PRODUCTS

VAC-V2 Gas Permeability Tester

Differential Pressure Method

Features:

- Gas transmission rate, solubility coefficient, diffusion coefficient and permeability coefficient of the specimen could be obtained at one operation
- 3 distinct or equivalent specimens could be tested individually with independent test results at one operation
- Wide range and high precision temperature and humidity control to meet various test conditions
- The instrument comes with two test modes: proportional mode and standard mode
- Test range could be extended based on user requirements to test the materials with high permeability
- Test results could be easily obtained even at extreme condition by data fitting function, which could work at any temperature
- The instrument could be used to test poisonous, inflammable, and explosive gases (customization required)
- The instrument is controlled by computer and test process is automatic
- Reference film for fast calibration to ensure accurate and universal test data
- Standard RS232 port for convenient data transfer
- Supports LystemTM Lab Data Sharing System for uniform management of test results and test reports

Specifications

Test Range	0.05~50,000 $cm^3/m^2 \cdot 24h \cdot 0.1MPa$ (standard volume)
	At least 500,000 $cm^3/m^2 \cdot 24h \cdot 0.1MPa$ (extended volume)
Number of Specimens	3 (with independent test results)
Vacuum Resolution	0.1 Pa
Vacuum Degree of Test Chamber	<20 Pa
Temperature	5°C ~ 95°C
Accuracy	±0.1°C (standard)
Humidity	0%RH, 2%RH ~ 98.5%RH, 100%RH (humidity generator is optional)
Standards To Follow	ISO 15105-1, ISO 2556, GB/T 1038-2000, ASTM D1434, JIS K7126-1, YBB 00082003

FEATURED PRODUCTS

C830 Migration & Non-volatile-matter Content Tester

Evaporation Residue Testing

Professional:

- As an innovator and leading manufacturer, Labthink is dedicated to development of testing instrument for determination of migration and non-volatile contents, which is highly-integrated, automatic, precise and harmless.

High Efficiency

- High-efficiency and automatic design minimize the human operation. With advanced technology, the instrument supports simplified test method, testing process and combination of tests.

Intelligent

- The instrument is embedded with Labthink's latest operating software, which is featured with user-friendly interface, intelligent data processing, strict user management and secure data storage. It also supports Labthink exclusive DataShieldTM Note4 (Optional) which provides the users with safe and reliable management of test data and test reports.

Specifications

Parameter \ Model		830H
Test Range	mg	0.3 ~ 80000
Resolution	mg	0.1
Repeatability	mg	0.3
Test Temperature	°C	Room Temperature ~ 130
Temperature Accuracy	°C	±0.5
Test Standards	ISO 759-1981, GB 31604.8-2016, GB/T 9740-2003, YBB00342002-2015 and YBB00132002-2015, etc.	

MATERIAL TESTIN

W3/031 Water Vapor Transmission Rate Tester

Gravimetric Method

Features:

- Fully automatic testing process
- 3 independent specimens can be tested simultaneously
- Automatic reset before each weighing

Benefits:

- High precision
- Increase sample throughput
- High accuracy

Specifications

Testing Range	0.1~10,000 g/m²·24h (standard)
Accuracy	0.01 g/m²·24h
Temperature Range	15°C~55°C , ±0.1°C(standard)
Humidity Range	10%RH~98%RH, ±1%RH
Standards To Follow	ISO 2528, ASTM E96, ASTM D1653, TAPPI T464, DIN 53122-1, JIS Z0208

W3/062 Water Vapor Transmission Rate Test System Tester

Gravimetric Method

Features:

- Both water method and desiccant method can be used
- 6 distinct or equivalent specimens can be tested individually with independent test results at one operation
- Wide range of temperature and humidity control

Benefits:

- Modular can easily be connected to additional units; up to a total of 10 instruments and conduct up to 60 tests at the same time
- Standard air velocity enables constant humidity difference between two sides of test dishes
- Automatic reset before weighing
- Gas cylinder lifting structure

Specifications

Test Range	0.1 ~ 10,000 g/m²·24h (Water Method) 0.1 ~ 2500 g/m²·24h (Desiccant Method)
Accuracy	0.01 g/m²·24h
Temperature Range	15 °C~ 55 °C (standard)
Humidity Range	Water Method: 90%RH~ 70%RH Note1 Desiccant Method: 10%RH~98%RH Note2
Standards To Follow	ISO 2528, GB 1037, GB/T 16928, ASTM E96, ASTM D1653, TAPPI T464, DIN 53122-1, JIS Z0208, YBB 00092003

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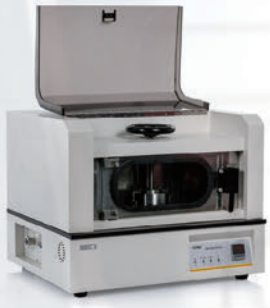
OX2/231 Oxygen Permeability Tester

Coulometric Method

- Tests 3 equivalent specimens at one operation and exports test results in average value
- 2 test modes for both films and packages, and accessories for package test are available for customization
- Equipped with constant temperature and humidity control devices (optional parts) to meet different test requirements
- Reference film for fast calibration to ensure accurate and universal test data

Specifications	Film Test	Package Test (customization available)
Test Range	0.01~1000 $cm^3/m^2 \cdot d$ (standard) 0.1~10,000 $cm^3/m^2 \cdot d$ (optional)	0.0001~10 $cm^3/pkg \cdot d$ (standard)
Number of Specimens	1~3	
Temperature Range	15°C~55°C (optional)	/
Temperature Accuracy	±0.1°C	/
Humidity Range	0%RH, 15%RH~90%RH, 100%RH (optional)	
Humidity Accuracy	±1%RH	
Test Gas	O2 and air (outside of supply scope)	
Gas Supply Pressure	⩾ 0.28 MPa	
Test Gas	ISO 15105-2, GB/T 19789, ASTM D3985, ASTM F2622, ASTM F1307, ASTM F1927, JIS K7126-2, YBB00082003	

VAC-V1 Gas Permeability Tester



Differential Pressure Method

Features:

- Testable gases include O_2, N_2, CO_2, Air, as well as explosive gases such as CH_4, H_2, etc.
- Coefficients of permeability, solubility and diffusion can be obtained along with GTR.
- Availibility for tests at extreme condition by data fitting function

Benefits:

- Availability for testing various gases including O_2, N_2, CO_2, Air, as well as explosive gases such as CH_4, H_2, etc.
- Improve physical properties of materials and develop new materials
- More choices of testing condition controls

Specifications

Testing Range	0.1~100,000 $cm^3/m^2 \cdot 24h \cdot 0.1MPa$ (standard volume) At least 600,000 $cm^3/m^2 \cdot 24h \cdot 0.1MPa$ (extended volume)
Temperature Range	Room temperature~50°C , ±0.1°C(standard)
Vacuum Degree of Testing Chamber	<20 Pa , 0.1Pa
Temperature	Room temperature~50°C
Accuracy	±0.1°C
Standards To Follow	ISO 2556, ISO 15105-1, ASTM D1434, JIS K7126-1

G2/130 Container Gas Permeability Tester

Manometric Method

Features:

- Patent design of container test by Manometric method
- Testable gases include O_2, N_2, CO_2, Air, as well as explosive gases such as CH_4, H_2, etc.
- Coefficients of permeability, solubility and diffusion can be obtained along with GTR

Benefits:

- Only supplier for container gas tests
- Availability for testing various gases including O_2, N_2, CO_2, Air, as well as explosive gases such as CH_4, H_2, etc.
- Improve physical properties of materials and develop new materials

Specifications

Testing Range	0.0001 ~ 1800 mL/pkg·day
Vacuum Resolution	0.1 Pa (standard)
Number of Specimens	1, 2 or 3
Test Temperature	Ambient Temperature (Standard)
Humidity Range	Closed Mode: 0%RH, 2%RH ~ 98.5%RH, 100%RH
Test Gas	O_2, N_2, and CO_2 (outside of supply scope)
Specimen Size	Max od. < Φ114 mm; height < 350 mm; Bottle mouth: od. < Φ47 mm, id. > Φ9 mm; Customization is available.

G2/131 Gas Permeability Tester

Manometric Method

Features:

- Three-in-one diffusion cell structure
- Testable gases include O_2, N_2, CO_2, Air, as well as explosive gases such as CH_4, H_2, etc.
- Coefficients of permeability, solubility and diffusion can be obtained along with GTR.

Benefits:

- Increase sample throughput
- Available for testing various gases including O_2, N_2, CO_2, Air, as well as explosive gases such as CH_4, H_2, etc.
- Improve physical properties of materials and develop new materials

Specifications

Testing Range	0.05~50,000 cm^3/m^2·24h·0.1MPa
Temperature Range	15°C~55°C (room temperature 23°C) , ±0.1°C(standard)
Humidity Range	0%RH, 2%~98.5%RH, 100%RH (humidity generator is optional), ±1%RH
Vacuum Degree of Testing Chamber	<20 Pa , 0.1Pa
Standards To Follow	ISO 2556, ISO 15105-1, ASTM D1434, JIS K7126-1

NG INSTRUMENTS

XLW(EC)

Auto Tensile Tester

Features:

- 8 built-in standard testing methods
- Bidirectional force can be detected
- Pneumatic clamps
- Over 100 types of clamps can be customized
- Embedded computer

Benefits:

- Tests can be quickly started
- Compression force can be detected
- Easy operation
- Broad applications
- More convenient and intelligent

Specifications

Load Cell Capacity	50N, 100N, 250N (optional)
Accuracy	Better than 0.5% FS
Speed	Forward 50, 100, 150, 200, 250, 300, 500 mm/min Backward 50, 100, 150, 200, 250, 300, 500 mm/min
Stroke	950 mm
Number of Specimens	1
Pneumatic Clamp	Available
Standards to Follow	ISO 37, ASTM E4, ASTM D882, ASTM D1938, ASTM D3330, ASTM F88, ASTM F904, JIS P8113

i-Strentek 1510

Universal Testing Machine

Features:

- 10000N load cell
- Embedded computer
- Over 100 type of clamps
- Many applications customizable

Benefits:

- Double-column ball screw driving mechanism
- Multiple testing modes tensile strength, deformation, peeling, tearing, compression resistance, etc.
- Load cells, stepless speed change from 1 to 500mm/min
- The system is equipped with four USB ports and two net connection interfaces

Specifications

Load Cell Capacity	10000 N
Accuracy	1% FS
Speed	1-500mm/min (Stepless Speed Change)
Stroke	800 mm
Number ofSpecimens	1
Clamping Way	Pneumatic Specimen Clamp or Manual Clamp
Standards to Follow	ISO 37, ASTM E4, ASTM D882, ASTM D1938, ASTM D333, ASTM F88, ASTM F904, JIS P8113

MATERIAL TESTIN

i-Boxtek 1700

Box Compression Tester

Features:

- Three test modes of crushing force test, stacking test A and stacking test B
- Over-load protection, maximum stroke protection and error alert
- Miniaturization and integration structure design
- Embedded computer

Benefits:

- Versatile applications
- Security optimization
- Suitable for various test environments
- Advanced design

Specifications

Load Cell Capacity	9KN; 1%FS
Resolution	1N
Deformation Resolution	0.1mm
Standards To Follow	ASTM D642, ASTM D4169, TAPPI T804, ISO 12048, JIS Z0212

HST-H3

Heat Seal Tester

Features:

- Broad control range of temperature, pressure and time
- Sealing jaws can be customized
- 2 operation modes of manual and pedal switch

Benefits:

- Broad applications
- Versatile applications
- User-friendly

Specifications

Sealing Temperature	Room temperature ~ 300°C , ±0.2°C (Room temperature ~572°F, ±32.36°F)
Sealing Pressure	0.05 MPa ~ 0.7MPa
Dwell Time	0.1~999.9 s
Standards To Follow	ASTM F2029

NG INSTRUMENTS

CLASSIC 513

Gradient Heat Seal Tester

Features:

- P.I.D. temperature control technology ensures preset temperature to be reached rapidly without any fluctuation
- Wide range control of temperature, pressure and time could meet various test conditions
- Manual or pedal switch control, as well as anti-scald design provides convenient and safe operating environment
- The instrument is controlled by micro-computer with LCD, PVC operation panel, and menu-interface, which is convenient for customers
- The instrument could test 5 groups of 2 specimens at different temperatures simultaneously, and accurately and efficiently obtain heatsealability parameters of the tested specimens

Specifications

Sealing Temperature	Room temperature ~ 250°C
Dwell Time	0.5 ~ 999.9 s
Sealing Pressure	0.1 MPa ~ 0.7 MPa
Temperature Control Accuracy	±0.2°C
Temperature Measuring Accuracy	±2°C
Temperature Gradient	⩽20°C
Standards To Follow	ASTM F2029, QB/T 2358, YBB 00122003

MXD-02

Coefficient of Friction Tester

Features:

- Test modes for ASTM and ISO are preset and can be initiated through "Quick Start"
- Sled can be customized
- Oscillating coefficient and confident value can be obtained along with COF

Benefits:

- Versatile applications
- Meet different testing requirements
- More accurate and reliable results

Specifications

Capacity Range	0 ~ 5 N
Accuracy	0.5% FS
Mass of Sled	200 g (Standard) , Sled of specific weight could be customized
Stroke	70 mm, 150 mm
Test Speed	100 mm/min, 150 mm/min ; Test speed could be adjusted
Environment Condition	Temperature: 23±2°C ; Humidity: 20%RH ~ 70%RH
Standards to Follow	ISO 8295, ASTM D1894, TAPPI T816

FPT-F1

Friction / Peel Tester

Features:

- Two test modes: coefficient of friction test and 180 degree peel test
- Conforms to multiple standards of ISO, ASTM
- Broad range and high-accuracy temperature controller

Benefits:

- Multi-tasking
- Versatile applications
- Good accuracy

Specifications

Capacity Range	0~5 N, 0~10 N, 0~30 N
Accuracy	0.5% FS
Mass of Sled	200 g, 500 g (Standard),100 g, 1000 g, 1814 g, 2000 g are optional
Testing Speed	50, 100, 150, 200, 250, 300, 500 mm/min
Temperature	Room Temperature ~ 99.9°C
Instrument Dimension	850 mm (L) x 350 mm (W) x 290 mm (H)
Net Weight	30 kg
Standards To Follow	ISO 8295, ISO 8510-2, ASTM D1894, ASTM D4917, ASTM D3330, TAPPI T816, TAPPI T549, GB 10006, GB/T 2790, GB/T 2791, GB/T 2792

SLY-S1

Elmendorf Tearing Tester

Features:

- Computer control, electronic measurement and computer assisted level adjustment
- Professional software provides advanced "Three Circle" analysis function
- Equipped with multiple capacity pendulum

Benefits:

- High accuracy
- Easy interpretation
- Versatile applications

Specifications

Pendulum Capacity	200 gf, 400 gf, 800 gf, 1600 gf, 3200 gf, 6400 gf
Gas Supply Pressure	0.6 MPa (outside of supply scope)
Standards To Follow	ASTM D1922, ASTM D1424, ASTM D689, ISO 6383-1-1983, ISO6383-2-1983, ISO 1974, TAPPI T414

NG INSTRUMENTS

FDI-01

Falling Dart Impact Tester

Features:

- Touch screen
- 2 automatic testing methods
- Electromagnetic suspension and automatic release of the falling dart
- Pneumatic clamping and built-in observation light

Benefits:

- Easy operation
- Broad applications
- High accuracy
- User-friendly

Specifications

Test Method	Method A or Method B is optional
Test Range	Method A: 50~2000 g Method B: 300~2000 g
Accuracy	0.1g (0.1J)
Specimen Clamp	Pneumatic Clamp
Pressure of Gas Supply	0.6 MPa (outside of supply scope)
Standards to Follow	ASTM D1709, ISO 7765-1-1988, JIS K7124-1, GB/T 9639.1-2008

FIT-01

Film Pendulum Impact Tester

Features:

- Adjustable range
- Pneumatic clamping and pendulum release mechanism
- Data automatic statistics

Benefits:

- More applications
- High accuracy
- User-friendly

Specifications

Impact Energy	1 J, 2 J, 3 J (Standard)
Resolution	0.001 J
Impact Head Size	Φ25.4 mm, Φ19 mm, Φ12.7 mm (Customization is available)
Specimen Clamp Diameter	Φ89 mm, Φ60 mm
Specimen Size	100 mm x 100 mm or Φ100 mm
Gas Supply Pressure	0.6 MPa (outside of supply scope)
Standards to Follow	GB 8809-88, ASTM D3420, NF T54-116

i-Thermotek 2720

Thermal Shrinkage Tester

Features:

- Force and displacement can be measured at the same time
- High-precision load cell and displacement transducer are used for accurate determination of thermal parameters
- Shrinking force, contracting force and shrinkage ratio and are displayed in real time
- Intelligent reminder for sensor calibration provides a safe data operation environment

Benefits:

- High precision
- Advanced design
- Multi function and high efficiency
- Easy operation

Specifications

Force Test Range	0.02N~6N
Note	Customization is available.
Force Accuracy	±0.2%FS
Displacement Range	0.5~90 mm (±0.5 mm)
Working Temperature Range	Room Temperature~210℃ (±0.5℃)
Standards to follow	ISO14616-1997, DIN 53369-1976

RSY-R2

Film Free Shrink Tester

Features:

- Digital P.I.D. temperature control technology ensures the preset temperature to be reached rapidly without any fluctuation
- The instrument is heated through fluid medium, which could provide the stable test environment
- Automatic timer function to efficiently guarantee the accuracy of test data
- The instrument is controlled by micro-computer with LCD, PVC operation panel, and menu interface
- Standard clamp wire mesh support could make the test done smoothly

Specifications

Temperature Range	Room temperature ~ 200°C
Temperature Control Accuracy	±0.3°C
Temperature Measuring Accuracy	±2°C
Specimen Size	⩽140 mm x 140 mm
Standards To Follow	GB/T 13519, ASTM D2732

CLASSIC 650

Headspace Gas Analyzer

Features:

- Portable design
- Build-in data storage function
- Micro-printer for convenient data printing

Benefits:

- High accuracy
- Easy operation
- User-friendly

Specifications

Specifications	CLASSIC 650 Headspace Gas Analyzer	
Testable Gases	O_2 (Standard)	CO_2 (optional)
Test Range	0.2% ~ 21%	2% ~ 100%
Test Accuracy	±0.2%	±2%
Sampling Volume	⩾5 mL (Standard Atmospheric Pressure)	⩾20 mL (Standard Atmospheric Pressure)

NG INSTRUMENTS

MFY-01

Leak Tester

Features:

- Automatic constant pressure compensation
- Chamber size can be customized
- Digital display for vacuum degree and vacuum retention time preset
- Automatic back flushing release

Benefits:

- Vacuum degree guarantee
- Versatile applications
- High accuracy
- User-friendly

Specifications

Vacuum Degree	0 ~ -90 KPa
Accuracy	1% FS
Vacuum Chamber Effective Sizes	Φ270 mm x 210 mm (H) (standard) Φ360 mm x 585 mm (H) (optional) Φ460 mm x 330 mm (H) (optional) Note: customization is available for other sizes
Gas Supply Pressure	0.7 MPa (outside of supply scope)
Standards to Follow	GB/T 15171, ASTM D3078

LSSD-01

Leak and Seal Strength Detector

Features:

- Various types of fixtures can be customized
- Different test modes: burst, creep and creep to failure

Benefits:

- Versatile applications
- More applications

Specifications

Test Range	0~600 KPa; 0~87.0 psi (standard) 0~1.6 MPa; 0~232.1 psi (optional)
Gas Injection Head	Φ10 mm (standard) Φ4 mm, Φ1.6 mm (optional)
Standards to Follow	ISO 11607-1, ISO 11607-2, GB/T 10440, GB 18454, GB 19741, GB 17447, ASTM F1140, ASTM F2054, GB/T 17876, GB/T 10004, BB/T 0025, QB/T 1871, YBB 00252005, YBB 00162002

NJY-05B

Digital Torque Tester

Features:

- Dual test modes including application torque test and removal torque test
- Innovative and patented design of manipulator supports automatic clamping, opening and locking of specimens, which minimizes the errors caused by manual operations
- Test accuracy is greatly improved. The peak value can be maintained automatically, which ensures the recording of the accurate test results
- Clamping force, locking force and rotation speed can be adjusted freely
- Intelligent designs of overload protection, automatic zeroing and error alert for safe test operation
- Manual test and automatic test can be selected freely

Specifications

Load Cell Capacity	5 Nm (Standard) ; 20 Nm (Optional) ; 40 Nm (Optional)
Accuracy	Better than 0.5% FS
Resolution	0.0001 Nm
Body Clamp Range	Φ5 mm ~ Φ170 mm
Cap Clamp Range	Φ10 mm ~ Φ80 mm
Height of Bottle	20 mm ~ 400 mm
Maximum Application & Removal Torque	2 Nm (Customization available for other specs)
Standards to Follow	ASTM D2063, ASTM D3198, ASTM D3474, BB/T 0025, BB/T 0034, GB/T 17876

CLASSIC 920

Lasting Adhesive Tester

Features:

- Standard test plates and weights ensure the accuracy of test data
- The instrument is controlled by micro-computer, with PVC operation panel, membrane switches and LCD, which is convenient for customers to operate and view test data
- Six testing stations could test groups of specimens simultaneously
- Auto timing and locking functions provide higher accuracy of test results

Specifications

Standard Roller	2000 g ±100 g
Weighthook)	1000 g ±5 g (with triangle hook)
Test Plate	125 mm (L) x 50 mm (W) x 1.1 mm (D)
Timing Range	0 ~ 100 h (standard) 0 ~ 10000 h (optional)
Number of Stations	6
Standards to Follow	GB/T 4851, ASTM D3654, JIS Z0237

RT-01

Rub Tester

Features:

- 2 test stations with 2 types of sled
- Sled can be customized
- 4 rub speeds are available

Benefits:

- Versatile applications
- Good flexibility
- User-friendly

Specifications

Rub Pressure	8.9 N(2lb); 17.8N(4lb)
Rub Speed	21, 42, 85, 106 cpm
Rub Mode	Arc Reciprocating Movement
Rub Times	0 ~ 999999
Number of Specimens	1 ~ 2
Standards to Follow	ASTM D5264, TAPPI T830

FT-F1

Fogging Tester

Features:

- Wide range and high precision temperature control
- 6 test stations

Benefits:

- Accurate results
- High efficiency

Specifications

Temperature Range of High-Temperature Bath	Room temperature ~ 150°C (room temperature ~ 280°C is optional) , ±0.1°C (150°C)
Temperature Range of Low-Temperature Bath	0 ~ 100°C , ±0.1°C
Size of High-Temperature Bath	670 mm (L) x 490 mm (W) x 540 mm (H)
Size of Low-Temperature Bath	400 mm (L) x 220 mm (W) x 520 mm (H)
Standards to Follow	ISO 6452, DIN 75201, SAE J1756, QB/T 2728, BS EN 14288, PV 3920, PV 3015, ES-X83231, NES M0161, D45 1727, GM 9305P, TSM 0503G

Others

1. Water Vapor Permeability Tester

Items \ Model	W3/130
Test Range	0.05 ~ 1000 g/m²·24h
Accuracy	0.01 g/m²·24h
Specimen Size	108 mm x 108 mm
Specimen Thickness	≤ 3 mm
Test Area	50 cm²
Temperature Range	15°C ~ 55°C (ambient temperature 23°C)
Temperature Accuracy	0.1°C
Humidity Range	0 ~ 100%RH
Number of Specimens	3 with independent test results

2. Gas Permeability Tester

Items \ Model	VAC-V3
Number of Specimen	6 pieces with independent test results (group A and group B, each with 3 pieces)
Testing Range	0.1~50,000 cm³/m²·24h·0.1MPa (Standard volume for group A) 1.0~500,000 cm³/m²·24h·0.1MPa (Extended volume for group A) 0.01~1,000 cm³/m²·24h·0.1MPa (Group B)
Temperature Range	5°C ~ 95°C, ±0.1℃
Humidity Range	/

Items \ Model	VAC-VBS
Testing Range	0.1~100,000 cm³/m²·24h·0.1MPa (standard)
Temperature Range	15°C~55°C (constant temperature controller is outside of supply scope)
Vacuum Degree of Testing Chamber	<20 Pa , 0.1Pa
Test Temperature	15°C~55°C (constant temperature controller is optional)
Accuracy	±0.1°C
Test Area	28.27 cm²

Items \ Model	G2/132	BTY-B2P
Number of Specimen	3	3, 2 or 1
Testing Range	0.05~20,000 cm³/m²·24h·0.1MPa	10~10,000 s/in²·100 mL·1.22 KPa
Temperature Range	15°C~55°C (room temperature 23°C), ±0.1℃	/
Humidity Range	0%RH, 2%~98.5%RH, 100%RH (humidity generator is outside of supply scope), ±1%RH	/

3.Auto Tensile Tester

Items \ Model	XLW	XLW(M)	XLW(PC)
Testing Range	100N, 200N, 500N (one of them is available)	100 N, 200 N, 500 N (one of them is available)	500 N (standard) 50 N (optional)
Accuracy	1% FS	1% FS	0.5% FS
Testing Speed	50, 100, 150, 200, 250, 300, 500 mm/min	50, 100, 150, 200, 250, 300, 500 mm/min	50, 100, 150, 200, 250, 300, 500 mm/min
Stroke	600 mm	600 mm	1000 mm
Number of Specimens	1	1	1
Pneumatic Clamp	/	Available	N/A

Items \ Model	MEGA 1500
Load Cell Capacity	500 N (Standard) 50N, 100N, 200N, 1000N (Optional)
Accuracy	1% FS
Test Speed	1-500mm/min (Stepless Speed Change)
Stroke	1200 mm
Number of Stations	6
Number of Specimens	1~6
Clamping Way	Pneumatic Specimen Clamp

Items \ Model	XLW(B)	BLD-200N	MED-01
Testing Range	200 N (standard) 30 N, 50 N, 100 N, 500 N (optional) 750 N (Customization Available)	200 N (standard) 30 N, 50 N, 100 N, 500 N (optional) 10N (Customization Available)	250 N (standard) 50 N, 100 N, 500 N (optional) 750 N, 1000 N (Customization Available)
Accuracy	1% FS	1% FS	Better than 0.5% FS
Testing Speed	50, 100, 150, 200, 250, 300, 500 mm/min	50, 100, 150, 200, 250, 300, 500 mm/min	Forward: 10, 50, 100, 150, 200, 300 mm/min (standard) Backward: 10, 50, 100, 150, 200, 300 mm/min (standard)
Stroke	600 mm	500 mm	600 mm
Number of Specimens	1	1	1
Pneumatic Clamp	/	/	/

NG INSTRUMENTS

6. Heat Seal and Hot Tack Tester

Items \ Model	HST-H6	HTT-L1
Sealing Temperature	Room temperature～300℃, ±0.2℃	Room temperature～250℃, ±0.2℃
Dwell Time	0.1~999.9 s	0.1~999.9 s
Testing Range	/	0～200N(30N, 50N or 100N is optional)
Testing Speed	/	100, 150, 200, 300, 500 and hot tack (mm/min)
Hot Tack Time	/	0.1~999.9 s

5. Digital Torque Tester

Specifications \ Model	NJY-20	
Load Cell Capacity	20 Nm (Standard)	
	40 Nm (Optional)	
	50 Nm (Optional)	
Accuracy	1% FS	
Resolution	0.001 Nm	

7. Coefficient of Friction Tester

Specifications \ Model	MXD-01	MXD-01A	COF-P01
Capacity Range	0~5 N	0~5 N	0°~85°
Accuracy	1% FS	1% FS	0.01°
Stroke	10 mm + 60 mm	⩾130 mm	N/A
Mass of Sled	200g, 500g (1000g optional)	200g (500g optional)	1300g (standard) 235g,200g(optional)
Testing Speed	100mm/min	150mm/min	0.1°/s ~ 10.0°/s

4.Box Compression Tester

Specifications \ Model	XYD-15K	
Load Cell Capacity	15 KN or 45 KN (Optional)	
Accuracy	1% FS	
Force Resolution	1 daN	
Deformation Resolution	0.1 mm	
Test Speed	5 mm/min, 10 mm/min, 12.7 mm/min	
Test Space	1 m (L) x 1 m (W) x 1.3 m (H)	

8. Falling Dart Impact Tester

Model / Specifications	BMC-B1
Test Method	Method A or Method B is optional
Test Range	Method A: 50~2000 g Method B: 300~2000 g
Accuracy	0.1 g (0.1J)
Specimen Clamp	Pneumatic Clamp
Pressure of Gas Supply	0.6 MPa (outside of supply scope)

9. Thickness Tester

Model / Items	CHY-C2A
Testing Range	0~2 mm (standard) 0~6 mm; 12 mm (optional)
Resolution	0.1 μm
Testing Pressure	17.5±1 KPa (film); 50±1 KPa (paper)
Contact Area	50 mm² (film); 200 mm² (paper) Note: Select one presser foot for film or paper; Customization is available

10. Flex Durability Tester

Model / Items	FDT-02
Flex Frequency	45 /minute
Tensile & Pressing Force	300 N
Torque	2 Nm
Specimen Thickness	≤2.5mm (Sample clamps are needed for other thickness specimen)
Flex Angle	440° or 400°
Horizontal Stroke	155 mm or 80 mm
Number of Stations	4
Number of Specimens	1 ~ 4

11. Primary Adhesive Tester

Model / Specifications	CZY-G
Angle Range	0 ~ 60°
Panel Width	120 mm
Testable Area Width	80 mm
Standard Steel Ball	1/32 inch ~ 1 inch

12. Lasting Adhesive Tester

Model / Specifications	CZY-6S
Standard Roller	2000 g ±50 g
Weight	1000 g ±10 g (with load plate)
Test Plate	60 mm (L) x 40 mm (W) x 1.5 mm (D) (Same as Load Plate)
Timing Range	0 ~ 99 h (standard) 0 ~ 9999 h (optional)
Number of Stations	6

NG INSTRUMENTS

13. Air Permeability Tester

Specifications \ Model	TQD-G1
Test Range of Pressure	0 ~ 1000 Pa
Test Range of Flux	0 ~ 30 L/min
Specimen Size	Method A: 52 mm x 52 mm Method B:Φ12 mm ≤ D(diameter) ≤ Φ71 mm

14. Portable Heat Seal Strength Tester

Items \ Model	PSST-100
Capacity Range	0 ~ 100 N
Load Measurement Accuracy	1% FS
Resolution	0.01 N
Tensile Stroke	100 mm
Standards To Follow	QB/T 2358

15. Disk Stripping Tester

Specifications \ Model	BLJ-02
Pressure	100 N
Peeling Speed	0.8 m/s
Standards to Follow	GB/T 7707, JIS C2107, JIS Z0237

16. Adhesive Tape Roller

Specifications \ Model	YGJ-02
Rolling Speed	300 mm/min
Roller Mass	20 N ±0.5 N
Rolling Times	3 (the most could be set 999)
Standards to Follow	GB/T 7707, JIS C2107, JIS Z0237

17. Standard Light Source

Specifications \ Model	SBG-80 D65/A	
	D65	A
Color Rendering	>96	100
Color Temperature	6500 K	2900 K
Evenness	>80%	

18. Double Light Source Viewer

Specifications \ Model	SPS-80T	
	D65	A
Color Rendering	>96	100
Color Temperature	6500 K	2900 K
Board Size	1050 mm x 700 mm	

AFTER-SALE SERVICE COMMITMENT

Quick response within 1 hour

On-site support within 48 hours

Phone: (+86) 531-5870 2798 / 5870 2776 Fax: (+86) 531-5870 2781

Labthink International, Inc. (USA)

200 River's Edge Drive, Medford, MA 02155, USA
Tel: +1-617-830 2190
Fax: +1-781-219 3638
E-mail: info@labthinkinternational.com
Website: www.labthinkinternational.com

Labthink Instruments Co., Ltd. (CHINA)

144 Wuyingshan Road, Jinan 250031, China
Tel: +86-531-85068566
Fax: +86-531-85062108
E-mail: marketing@labthink.com
Website: www.labthink.com

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