

Labthink Instruments Co.,Ltd.

MATERIAL TESTING INSTRUMENTS

Labthink®

Gastra 7010

Labthink®





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.

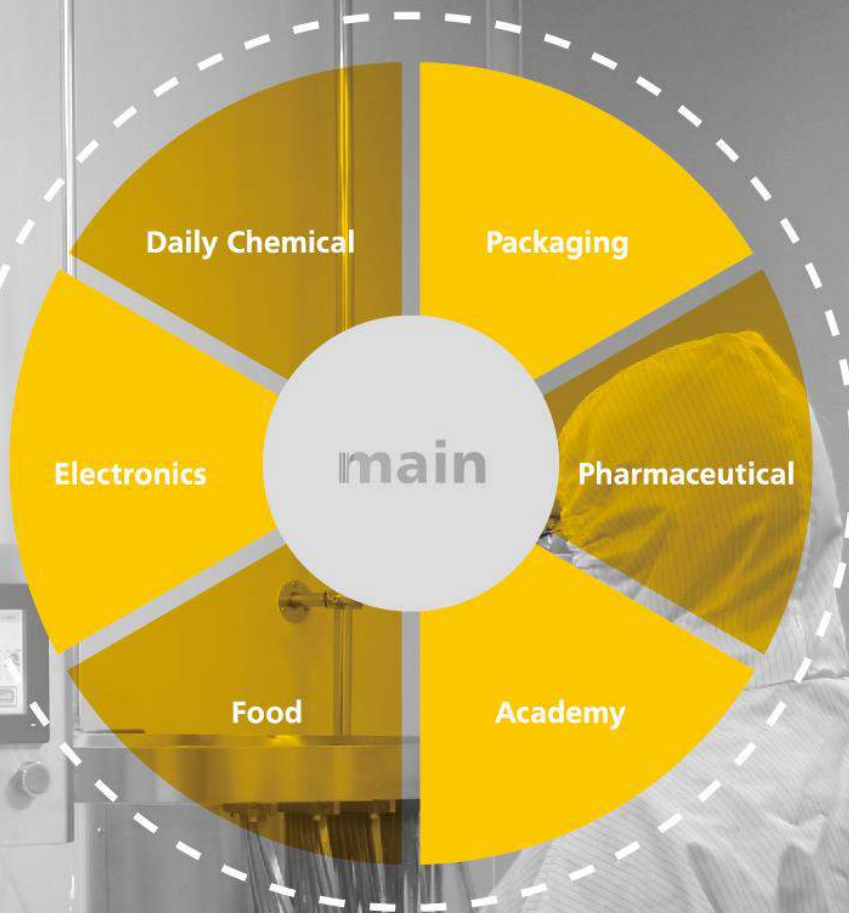
2) Commercial Testing Services

Packaging material Testing for barrier property and other physical properties

3) LIMS, Laboratory Information Management System



Applied Industry



Others



MATERIAL TESTING

W3/330 Water Vapor Transmission Rate Test System



Electrolytic Sensor

Features:

- Three-in-one diffusion cell structure
- High resolution of 0.001g/m²·24h
- Broad range and high accuracy of temperature and humidity control

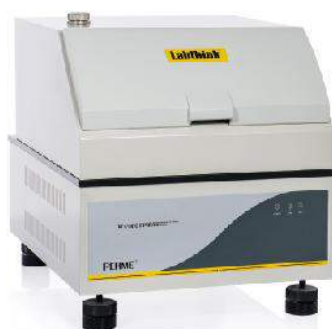
Benefits:

- Increase sample throughput
- Available for high barrier materials
- Simulate some realistic application of packaging conditions in the market

Specifications

Parameter	Film Test	Container Test
Testing Range	0.001~40 g/m ² ·24h (standard)	0.0001~0.2 g/pkg·d
	0.01~1000 g/m ² ·24h (optional)	
Resolution	0.001 g/m ² ·24h	0.00001 g/pkg·d
Temperature Range	15°C~55°C, ±0.1°C (standard)	
Humidity Range	0%RH, 35%RH~90%RH, 100%RH, ±1%RH	
Standards To Follow	ISO 15106-3	

W3/060 Water Vapor Transmission Rate Test System



Gravimetric Method

Features:

- Fully automatic testing process
- 6 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/m ² ·24h (standard)
Accuracy	0.01 g/m ² ·24h
Temperature Range	15°C~55°C, ±0.1°C(standard)
Humidity Range	90%RH~70%RH (standard is 90%RH), ±1%RH
Standards To Follow	ASTM E96, ASTM D1653, ISO 2528, TAPPI T464, DIN 53122-1, JIS Z0208

ING INSTRUMENTS

W3/230 Water Vapor Transmission Rate Test System

Infrared Sensor

Features:

- Three-in-one diffusion cell structure
- High resolution of 0.01g/m²·24h
- Broad range and high accuracy of temperature and humidity control

Benefits:

- Increase sample throughput
- Available for high barrier materials
- Simulate some realistic application of packaging conditions in the market



Specifications

Parameter	Film Test	Container Test
Testing Range	0.01~40 g/m²·24h (standard)	0.0001~0.2 g/pkg·d
	0.1~1000 g/m²·24h (optional)	
Temperature Range	15°C~55°C , ±0.1°C (standard)	
Humidity Range	0%RH, 35%RH~90%RH, 100%RH , ±1%RH	
Standards To Follow	ISO 15106-2, ASTM F1249, TAPPI T557, JIS K7129	

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/m ² ·24h (standard)
Accuracy	0.01 g/m ² ·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

W3/030 Water Vapor Transmission Rate Tester

Gravimetric Method

Features:

- Fully automatic testing process
- 3 same 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/m ² ·24h (standard)
Accuracy	0.01 g/m ² ·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

MATERIAL TESTING

OX2/230 Oxygen Transmission Rate Test System



Coulometric Method

Features:

- Three-in-one diffusion cell structure
- Both high-purity nitrogen and hydrogen-mixed nitrogen can be used as carrier gas
- Equipped with palladium catalysts for carrier gas purification

Benefits:

- Increase sample throughput
- Flexible selection of carrier gas
- Increase purity of nitrogen and obtain high accuracy of OTR results

Specifications

Parameter	Film Test	Container Test(customization available)
Testing Range	0.01~6500 cm ³ /m ² ·d (standard)	0.0001~60 cm ³ /pkg·d
	0.07~65,000 cm ³ /m ² ·d (optional)	
Resolution	0.001 cm ³ /m ² ·d	0.00001 cm ³ /pkg·d
Temperature Range	15°C~55°C, ±0.1°C (standard)	
Humidity Range	0%RH, 35%RH~90%RH, ±1%RH	
Standards To Follow	ISO 15105-2, ASTM D3985, ASTM F2622, ASTM F1307, ASTM F1927, JIS K7126-2	

OX2/231 Oxygen Permeability Tester



Coulometric Method

Features:

- Three diffusion cells can test three same samples simultaneously
- Entry level model
- Availability for contact lens OTR test

Benefits:

- High efficiency
- Cost effective
- Versatile applications

Specifications

Parameter	Film Test	Container Test(customization available)
Testing Range	0.01~1000 cm ³ /m ² ·d (standard)	0.0001~10 cm ³ /pkg·d (standard)
	0.1~10,000 cm ³ /m ² ·d (optional)	
Resolution	0.01 cm ³ /m ² ·d	0.0001 cm ³ /pkg·d
Temperature Range	15°C~55°C (outside of supply scope), ±0.1°C	
Humidity Range	0%RH, 15%RH~90%RH, 100%RH (outside of supply scope), ±1%RH	
Standards To Follow	ISO 15105-2, ASTM D3985, ASTM F2622, ASTM F1307, ASTM F1927, JIS K7126-2	

NG INSTRUMENTS

G2/131 Gas Permeability Tester

Manometric Method

Features:

- Three-in-one diffusion cell structure
- Testable gases include O₂, N₂, CO₂, Air, as well as explosive gases such as CH₄, H₂, etc.
- Coefficients of permeability, solubility and diffusion can be obtained along with GTR.

Benefits:

- Increase sample throughput
- Available for testing various gases including O₂, N₂, CO₂, Air, as well as explosive gases such as CH₄, H₂, 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 outside of supply scope), ±1 %RH
Vacuum Degree of Testing Chamber	<20 Pa , 0.1Pa
Standards To Follow	ISO 2556, ISO 15105-1, ASTM D1434, JIS K7126-1

VAC-V2 Gas Permeability Tester

Manometric Method

Features:

- Three diffusion cells can test three same samples simultaneously
- Testable gases include O₂, N₂, CO₂, Air, as well as explosive gases such as CH₄, H₂, etc.
- Coefficients of permeability, solubility and diffusion can be obtained along with GTR

Benefits:

- Increase sample throughput
- Available for testing various gases including O₂, N₂, CO₂, Air, as well as explosive gases such as CH₄, H₂, etc.
- Improve physical properties of materials and develop new materials



Specifications

Testing Range	0.05~50,000 cm ³ /m ² ·24h·0.1MPa (standard volume) At least 500,000 cm ³ /m ² ·24h·0.1MPa (extended volume)
Temperature Range	5°C ~ 95°C , ±0.1°C(standard)
Humidity Range	0%RH, 2%~98.5%RH, 100%RH (humidity generator is outside of supply scope), ±1%RH
Vacuum Degree of Testing Chamber	<20 Pa , 0.1Pa
Standards To Follow	ISO 2556, ISO 15105-1, ASTM D1434, JIS K7126-1

MATERIAL TESTING

VAC-V1 Gas Permeability Tester

Manometric Method

Features:

- Testable gases include O₂, N₂, CO₂, Air, as well as explosive gases such as CH₄, H₂, etc.
- Coefficients of permeability, solubility and diffusion can be obtained along with GTR.
- Availability for tests at extreme condition by data fitting function

Benefits:

- Availability for testing various gases including O₂, N₂, CO₂, Air, as well as explosive gases such as CH₄, H₂, 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 ·24h·0.1MPa (standard volume) At least 600,000 cm ³ /m ² ·24h·0.1MPa (extended volume)
Temperature Range	Room temperature~50°C , ±0.1°C(standard)
Vacuum Degree of Testing Chamber	<20 Pa , 0.1Pa
Standards To Follow	ISO 2556, ISO 15105-1, ASTM D1434, JIS K7126-1



VAC-VBS Gas Permeability Tester

Manometric Method

Features:

- Three diffusion cells can test three same samples simultaneously
- Testable gases include O₂, N₂, CO₂, Air, as well as explosive gases such as CH₄, H₂, etc.
- Coefficients of permeability, solubility and diffusion can be obtained along with GTR.

Benefits:

- Increase sample throughput
- Availability for testing various gases including O₂, N₂, CO₂, Air, as well as explosive gases such as CH₄, H₂, etc.
- Improve physical properties of materials and develop new materials

Specifications

Testing Range	0.1~100,000 cm ³ /m ² ·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
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 O₂, N₂, CO₂, Air, as well as explosive gases such as CH₄, H₂, 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 O₂, N₂, CO₂, Air, as well as explosive gases such as CH₄, H₂, etc.
- Improve physical properties of materials and develop new materials

Specifications

Testing Range	0.0001 ~ 1800 mL/pkg·day
Temperature Range	Room Temperature (Standard)
Humidity Range	Closed Mode: 0%RH, 2%RH ~ 98.5%RH, 100%RH



NG INSTRUMENTS

G2/110

Separation Membrane Permeability Analyzer

Features:

- Quantitative analysis of single gas or mixed gas permeability
- Analysis of gas permeability in separation membranes
- User-friendly operating interface

Benefits:

- Quantitative analysis of component permeability in mixed gas
- The only instrument for analysis of gas permeability in separation membrane
- Easy operation

Specifications

Testing Range	$10^{-6} \sim 10^{-14} \text{cm}^3(\text{S.T.P}) \cdot \text{film thickness} / \text{cm}^2 \cdot \text{Sec} \cdot \text{cmHg}$
Temperature Range of Test Chamber	$15^\circ\text{C} \sim 55^\circ\text{C}, \pm 0.1^\circ\text{C}$
Temperature Range of Test Gas Pipeline	$(\text{Room temperature} + 5)^\circ\text{C} \sim 100^\circ\text{C}, \pm 0.1^\circ\text{C}$
Vacuum Degree of Testing Chamber	$< 20 \text{ Pa}$



OR2/410

Organic Gas Permeability Analyzer

Features:

- Quantitative analysis of organic gas permeability rate and coefficient
- Availability for film, sheet and container organic gas permeability tests
- Embedded computer control system and automatic test

Benefits:

- The only instrument for organic gas permeability test
- Versatile applications
- Easy operation

Specifications

Testing Range	$0.01 \sim 40 \text{ g/m}^2 \cdot \text{d} \cdot 100\text{ppm}$ (standard)
Testable Organic Gases	Organics (e.g. Benzene, ester, alcohol, aldehyde, ketone and ether)
Gas Concentration	$10 \text{ ppm} \sim 150 \text{ ppm}$
Gas Flow	$10 \sim 40 \text{ ml/min}$
Temperature Accuracy	$\pm 0.1^\circ\text{C}$



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 $\sim 150^\circ\text{C}$ (room temperature $\sim 280^\circ\text{C}$ is optional), $\pm 0.1^\circ\text{C}$ (150°C)
Temperature Range of Low-Temperature Bath	$0 \sim 100^\circ\text{C}, \pm 0.1^\circ\text{C}$
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



MATERIAL TESTING

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	500 N (standard) 50 N (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

XLW(PC)

Auto Tensile Tester

Features:

- 8 built-in standard testing methods
- Over 100 types of clamps can be customized
- Longer stroke of 1000mm
- Entry level model

Benefits:

- Tests can be quickly started
- Broad applications
- More applications for elongation test
- Budget saving



Specifications

Load Cell Capacity	500 N (standard) 50 N (optional)
Accuracy	0.5% FS
Speed	50, 100, 150, 200, 250, 300, 500 mm/min
Stroke	1000 mm
Number of Specimens	1
Pneumatic Clamp	N/A
Standards to Follow	ISO 37, ASTM E4, ASTM D882, ASTM D1938, ASTM D3330, ASTM F88, ASTM F904, JIS P8113

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
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	0~5N, 0~10N, 0~30N
Accuracy	0.5% FS
Mass of Sled	200 g (Standard), 100 g, 500 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
Standards to Follow	ISO 8295, ISO 8510-2, ASTM D1894, ASTM D4917, ASTM D3330, TAPPI T816, TAPPI T549

NG INSTRUMENTS

GHS-03

Gradient Heat Seal Tester

Features:

- 5 independent upper sealing jaws with 5 different temperature controllers and gas cylinders
- Broad control range of temperature, pressure and time
- 2 operation modes of manual and pedal switch

Benefits:

- High sample through-put with Versatile application
- Broad applications
- User-friendly



Specifications

Sealing Temperature	Room temperature~250 °C; ±0.2 °C
Sealing Pressure	0.1MPa~0.7MPa
Dwell Time	0.1~999.9 s
Temperature Gradient	≤20 °C
Standards to Follow	ASTM F2029

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
Sealing Pressure	0.05 MPa ~ 0.7MPa
Dwell Time	0.1~999.9 s
Standards to Follow	ASTM F2029

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

Testing Method	Positive pressure method
Testing Range	0~600KPa or 0~87.0 psi (standard) 0~1.6MPa or 0~232.1psi (optional)
Size of Injection Head	Φ 10mm (standard) Φ4mm, Φ1.6mm (optional)
Standards to Follow	ISO 11607-1, ISO 11607-2, ASTM F1140, ASTM F2054

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

Testing Method	Negative pressure method
Vacuum Degree	0~-90KPa, ±1%FS
Vacuum Chamber Effective Sizes	Φ270mm*210mm (H) (Standard) Φ360mm*585mm (H) (Optional) Φ460mm*330mm (H) (Optional)
Standards to Follow	ASTM D3078

MATERIAL TESTING

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)
Standards to Follow	ASTM D3420, NF T54-116

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

Testing Method	Method A or Method B is optional
Testing range	Method A: 50~2000g Method B: 300~2000g
Accuracy	0.1g (0.1J)
Standards to Follow	ASTM D1709

CHY-CA

Thickness Tester

Features:

- Manual or automatic operating mode
- Automatic specimen feeding under automatic mode
- Automatic lifting presser foot
- Automatic statistics and printing function

Benefits:

- Flexibility of operation
- Full automation
- High accuracy
- User-friendly



Specifications

Testing Range	0~2mm (standard) 0~6mm, 12mm (optional)
Resolution	0.1um
Testing Pressure	17.5±1KPa(film) 50±1KPa(paper)
Contact Area	50 mm ² (film); 200 mm ² (paper) Note: Select one presser foot for film or paper; Customization is available
Standards to Follow	ISO 4593, ISO 534, ISO 3034, ASTM D374, ASTM D1777, TAPPI T411, JIS K6250, JIS K6783, JIS Z1702, BS 3983, BS 4817

CHY-CB

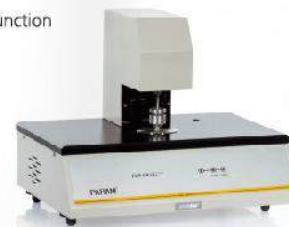
Thickness Tester

Features:

- Embedded computer
- Manual or automatic operating mode
- Automatic lifting presser foot
- Automatic statistics and printing function

Benefits:

- Advanced design
- Full automation
- High accuracy
- User-friendly



Specifications

Testing Range	0~2mm (standard) 0~6mm, 12mm (optional)
Resolution	0.1um
Testing Pressure	17.5±1KPa(film) 50±1KPa(paper)
Contact Area	50 mm ² (film); 200 mm ² (paper) Note: Select one presser foot for film or paper; Customization is available
Standards to Follow	ISO 4593, ISO 534, ISO 3034, ASTM D374, ASTM D1777, TAPPI T411, JIS K6250, JIS K6783, JIS Z1702, BS 3983, BS 4817

NG INSTRUMENTS

FST-02

Thermal Shrinkage Tester

Features:

- 3 groups of independent or identical specimens can be tested at one operation
- High precision load cell and displacement transducer
- Real-time value display
- Embedded computer

Benefits:

- High sample through-put
- High precision
- Easy interpretation
- Advanced design



Specifications

Capacity Range	0.2~30N(standard); $\pm 0.2\%$ Customization is available
Displacement Range	0.125~70 mm; ± 0.125 mm
Temperature Range	Room temperature~210 °C; ± 0.5 °C
Standards to Follow	ISO-14616-1997, DIN 53369-1976

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); 17.8 N(4lb)
Rub Speed	21, 42, 85, 106 cpm (circle per minute)
Standards to Follow	ASTM D5264, TAPPI T830

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
- Embedded computer

Benefits:

- Versatile applications
- Security optimization
- 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

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	200gf, 400gf, 800gf, 1600gf, 3200gf, 6400gf
Standards to Follow	ASTM D1922, ASTM D1424, ASTM D689, ISO 6383-1-1983, ISO 6383-2-1983, ISO 1974, TAPPI T414

Others

1. Water Vapor Permeability Tester

Model	W3/0120	W3/130
Items		
Number of Specimen	1~12 (with independent test results)	3
Testing Range	0.1~10,000 g/m ² ·24h (standard), 0.01 g/m ² ·24h	0.05 ~ 1000 g/m ² ·24h, 0.01 g/m ² ·24h
Temperature Range	15~65°C, ±0.1°C	15°C ~ 55°C (ambient temperature 23°C), ±0.1°C
Humidity Range	40% RH~95% RH (standard is 90% RH) ±1%RH	0 ~ 100%RH

2. Gas Permeability Tester

Model	VAC-V3	G2/132	BTY-B2P
Items			
Number of Specimen	6 pieces with independent test results (group A and group B, each with 3 pieces)	3	3, 2 or 1
Testing Range	0.1~50,000 cm ³ /m ² ·24h·0.1MPa (Standard volume for group A) 1.0~500,000 cm ³ /m ² ·24h·0.1MPa (Extended volume for group A) 0.01~1,000 cm ³ /m ² ·24h·0.1MPa (Group B)	0.05~20,000 cm ³ /m ² ·24h·0.1MPa	10~10,000 s/in ² ·100 mL·1.22 KPa
Temperature Range	5°C ~ 95°C, ±0.1°C	15°C~55°C (room temperature 23°C), ±0.1°C	/
Humidity Range	/	0%RH, 2%~98.5%RH, 100%RH (humidity generator is outside of supply scope), ±1%RH	/

3.Auto Tensile Tester

Model	XLW(G6)	XLW	XLW(M)
Items			
Testing Range	500 N, 50 N (one of them is available)	100N, 200N, 500N (one of them is available)	100 N, 200 N, 500 N (one of them is available)
Accuracy	0.5% FS	1% FS	1% FS
Testing Speed	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	1200 mm	600 mm	600 mm
Number of Specimens	1 ~ 6	1	1
Pneumatic Clamp	Available	/	Available
Model	XLW(B)	BLD-200N	MED-01
Items			
Testing Range	200 N (30 N, 50 N and 100 N are optional)	0~200 N (30 N, 50 N and 100 N are optional)	250 N (standard) 50 N, 100 N, 500 N (optional)
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 mm/min (standard) Backward:10, 50, 100, 150, 200 mm/min (standard)
Stroke	600 mm	500 mm	600 mm
Number of Specimens	1	1	1
Pneumatic Clamp	/	/	/

4.Heat Seal and Hot Tack Tester

Model	HST-H6	HTT-L1
Items		
Sealing Temperature	Room temperature~300°C, ±0.2°C	Room temperature~250°C, ±0.2°C
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. Coefficient of Friction Tester

Model	MXD-01	MXD-01A	COF-P01
Items			
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

6. Thickness Tester

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

7. Digital Torque Tester

Items	Model	NJY-20
Testing Range		20 Nm (standard) 40 Nm ,50 Nm (optional)
Accuracy		1% FS
Clamp Range		Φ 5 mm~ Φ 170 mm (Diameter)

8. Falling Dart Impact Tester

Items	Model	BMC-B1
Testing Range (Method A)		50~2000 g
Testing Range (Method B)		300~2000 g
Accuracy		0.1g (0.1J)

9. Flex Durability Tester

Items	Model	FDT-02
Flex Frequency		45/minute
Knead Angle		440° (90mm) or 400° (80mm)
Horizontal Stroke		155mm or 80mm
Number of Stations		4

10. Primary Adhesive Tester

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

11. Lasting Adhesive Tester

Items	Model	CZY-6S
Standard Roller		2000 g \pm 50 g
Weight		1000 g \pm 10 g (with load plate)
Timing Range		0 ~ 100 h (standard) 0 ~ 10000 h (optional)
Number of Stations		6

12. Vacuum Packaging Analyzer

Items	Model	RGT-01
Testing Range		0~15 ml (standard) Customization is available
Accuracy (Residual Oxygen)		\pm 0.1 mL (Gas volume is 0 - 5 mL) \pm 0.3 mL (Gas volume is 5 - 10 mL) \pm 0.5 mL (Gas volume is 10-15 mL)
Vacuum Degree		0 ~ -90 KPa
Accuracy		0.25 KPa

13. Headspace Gas Analyzer

Items	Model	HGA-02	HGA-03
Testable Gases		O ₂ , CO ₂	O ₂ , CO ₂
O ₂ Testing Range		0~100%	0~100%
O ₂ Testing Accuracy		0%~2%; \pm 0.3% 2%~100%; \pm 0.5%	0%~2%; \pm 0.3% 2%~100%; \pm 0.5%
CO ₂ Testing Range		0~100%	0~100%
CO ₂ Testing Accuracy		\pm 5%	\pm 5%
Sampling Volume		\geq 12 mL	\geq 12 mL

14. Air Permeability Tester

Items	Model	TQD-G1
Testing Range of Pressure		0 ~ 1 KPa
Testing Range of Flux		0 ~ 1800 L/h





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



Headquarters: Labthink Instruments Co., Ltd.

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

Branch Office in USA: Labthink International, Inc.

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: <http://www.labthinkinternational.com>

Specifications are subject to change without notice.
©Labthink Instruments Co.,Ltd. 2015