PACKAGING TESTING EQUIPMENT

Leader of packaging testing solutions

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International Technologies Trade - INTECTRADE S.A.S.

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ABOUT US

Since 2006, at International Technologies Trade (INTECTRADE S.A.S.) located in Bogotá D.C., Colombia; We supply manufacturing and commercial companies: machinery, equipment and accessories, consumables and raw materials of international origin, from the best and most reliable suppliers tailored to their needs.

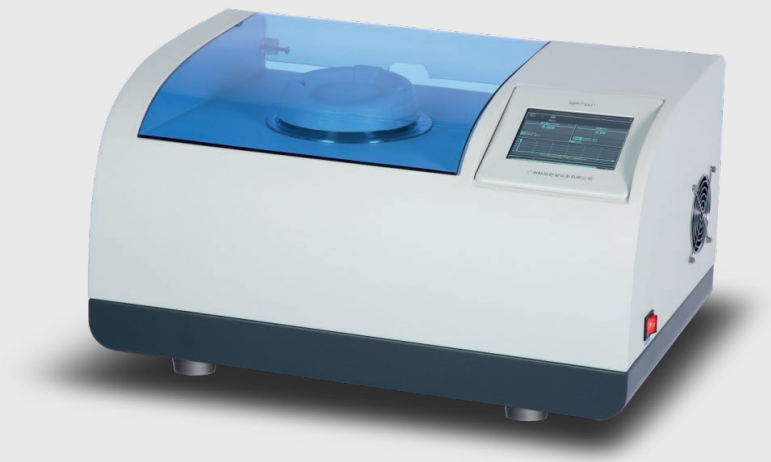
Our commercial, technical, and logistics staff have experience in management and management of representations with international companies, allowing us to develop successful solutions for the industrial sector of manufacturing and marketing of packaging mainly.

We carry out permanent search and innovation, to the requirements of our clients through contact with new technologies through fairs worldwide (Drupa Fair, BrasilPack, LabelExpo, Plast, InterPack, ChinaPlast, TaipeiPlast, CPhl, AndinaPack, Colombia Plast, among others). other international fairs) Research and consolidation of Suppliers and/or Manufacturers.

Guaranteeing in this way: security, honesty and trust for our clients. Innovation and technology; financial advice and follow-up in industrial processes, commercial logistics, customs follow-up and after sales technical services. Support of operations from China with our own Staff to guarantee our value proposition.

Transfer of technology and knowledge, for the growth of Colombian industry and commerce.

MTEC-W401 Water Vapor Permeability Analyzer



Function

W401 water vapor permeability analyzer is to test the water vapor transmission rate (WVTR) of films, sheets, panel, rubber, ceramics,glass, bottle, cans, boxes, etc. It is 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.

Features

- Easy to use :can set the parameters,display the testing curve and report.The machine is with operation system ,can operate independently(without computer).
- Temperature control :adopt international advanced electromagnetic temperature control technology, and the program stepping controlling system can control temperature elevating freely, without external accessories, temperature control precision accurate to 0.1 ℃.
- RH control: with double gas flow RH method control, with high precision.
- Fully-auto operation, one-button test, judge and stop automatically.
- Sensor automatic protection.
- Real time curves display of transmission rate, water vapour concentration, temperature and humidity; curves can be easily zoomed and moved.
- Precise enough to test high barrier materials like aluminum foil.
- Test either flat films or finished packages.

Standards

ASTM F1249
ISO 15106-2
GB/T26253
TAPPI T557
JIS K7129

Technical Specification

Items	Technical Parameters
Measurement range	0.001~100g/ (m^2 · 24h)
Resolution ratio	0.001g/(m^2 · 24h) (film and sheet)
Temperature control accuracy	15℃~45℃ (5~55℃ optional)
Temperature control accuracy	±0.1℃
Humidity range	30~90%RH, 100%RH
Humidity control accuracy	±1%RH
Number of testing specimen	1 pc
Specimen dimension	Φ100mm, permeability area 50.24cm^2,
Specimen thickness	≤2mm
Carrier gas	99.999% Nitrogen
Carrier gas pressure	≥0.1Mpa

Software Interface

Configuration

Main machine body, software, communication cable, Φ100 sample cutter, 1/8 inch copper tube, sealing grease, clip connector, water injector, spanner, standard test plate, mouse.

Users owned

User provide: nitrogen (99.999%), pressure releasing valve, computer
Optional (for purchase): test accessory, standard film, sealing grease, special clips, pressure releasing valve, computer.

MTEC-W405 Water Vapor Permeability Analyzer

Function

W405 water vapor permeability analyzer is to test the water vapor transmission rate (WVTR) of films or 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, 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.

Technical Specification

Items	Technical Parameters
Test range	0.005~500 g/m^2·24h (film and sheet)
Test precision	0.001 g/m^2·24h (film and sheet)
Temperature range	15~45℃ (15~60℃ optional)
Temperature accuracy	≤3mm
Humidity range	1~3 pieces
Humidity accuracy	99.999% N_2 (user provide)
Test area	≥0.1MPa
Sample size	5~120 mL/min
Sample thickness	1/8 inch metal pipe
Number of test sample	700×560×370mm
Carrier gas	80kg
Carrier gas pressure	
Carrier gas flow	
Gas supply port	
Instrument size	
Weight	

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)130543/4）of water vapor 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

· Temperature control: International advanced electromagnetic technology, program controlled, auto heating and cooling; no need of external accessories. Precision: 0.1℃.
· Humidity control: Dual gas flow method (dry gas and humid gas), high precision (1%RH) and stable flow.
· Carrying cutting-edge ARM controlling system, can run independently without computer.

High efficiency

· Three independent test chambers: With three sensors and each chamber test independently, three same/different samples can be tested at the same time and output three test reports, which improve test efficiency.
· With three different test modes of high, medium and lower barriers, can test films with different barrier property.
· Measurement precise up to 0.001 g/m^2·24h, can test high barrier materials, such as aluminum foil.
· By adding adaptive accessory, can test water vapor transmission of various containers such as bag, bottle, can and bowl.

Calibration & Certification

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

Reliable and easy-maintenance instrument

· Imported infrared sensor, with high precise and good performance, can work for a long time.
· Sensor over-range protection, prevent damaging important sensors.
· Highly modularized, easy to maintain.

Standards

ASTM F1249-2013

BS EN ISO 15106-2-2005

JIS K7129-2008

GB/T 26253-2010

YBB 00092003-2015

Configuration

Spare parts

Power cable, Communication cable, Sample cutter, Sealing grease, Ferrule, connector, Reference material, Allen wrench, Injection syringe, Sealing circle, Sealing circle for injection , syringe, Straddle wrench, Cross screwdriver, Air pipe, Conversion plug, Pressure regulating valve, Oil-water separator, Air compressor connector, Mouse, Wooden box, Metal air pipe

User provide

· The surroundings cannot have the vibration source, the experiment platform can not shake and must be horizontal
· Laboratory requirements：ordinary laboratory with air conditioner, temperature stale at 23°C±2
· Power supply：220V, 1 piece of three-hole switch socket with three-position
· Computer requirements：standard configuration(Windows7,with nine-pin serial port)
· Others: (for calibration) 1 bottle of 40 L bottled nitrogen, purity above 99.999%, other gases are optional
· Drying vessel（all samples must be degassed and dehydrated for 24 hours)
· Distilled water or purified water
· Air compressor

MTEC-W413 Water Vapor Permeability Analyzer

Function

W413 water vapor permeability analyzer is to test the water vapor transmission rate (WVTR) of films or 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, medical patch, etc.

Technical Specification

Items	Technical Parameters
Test range	0.002~1000 g/m²·24h
Test precision	0.001 g/m²·24h (film and sheet)
Temperature range	15~45℃ (15~60℃ optional)
Temperature accuracy	±0.1℃
Humidity range	30~90%RH，100%RH
Humidity accuracy	±1%RH
Test area	50.24 cm² (with additional adapting piece and be small as 0.785 cm²)
Sample size	Φ100 mm
Sample thickness	≤3mm
Number of test sample	1~3 pieces
Carrier gas	99.999% N_2 (user provide)
Carrier gas pressure	≥0.1MPa
Carrier gas flow	5~120 mL/min
Gas supply port	1/8 inch metal pipe
Instrument size	700×560×370mm
Weight	80kg

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)130543/4）of water vapor 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

· Temperature control: International advanced electromagnetic technology, program controlled, auto heating and cooling; no need of external accessories. Precision: 0.1℃.
· Humidity control: Dual gas flow method (dry gas and humid gas), high precision (1%RH) and stable flow.
· Carrying cutting-edge ARM controlling system, can run independently without computer.

High efficiency

· Three independent test chambers: With three sensors and each chamber test independently, three same/different samples can be tested at the same time and output three test reports, which improve test efficiency.
· With three different test modes of high, medium and lower barriers, can test films with different barrier property.
· Measurement precise up to 0.001 g/m^2·24h, can test high barrier materials, such as aluminum foil.
· By adding adaptive accessory, can test water vapor transmission of various containers such as bag, bottle, can and bowl.

Calibration & Certification

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

Reliable and easy-maintenance instrument

· Imported infrared sensor, with high precise and good performance, can work for a long time.
· Sensor over-range protection, prevent damaging important sensors.
· Highly modularized, easy to maintain.

Standards

ASTM F1249-2013

BS EN ISO 15106-2-2005

JIS K7129-2008

GB/T 26253-2010

YBB 00092003-2015

Configuration

Spare parts
Power cable, Communication cable, Sample cutter, Sealing grease, Ferrule, connector, Reference material, Allen wrench, Injection syringe, Sealing circle, Sealing circle for injection , syringe, Straddle wrench, Cross screwdriver, Air pipe, Conversion plug, Pressure regulating valve, Oil-water separator, Air compressor connector, Mouse, Wooden box, Metal air pipe

User provide
· The surroundings cannot have the vibration source, the experiment platform can not shake and must be horizontal
· Laboratory requirements：ordinary laboratory with air conditioner, temperature stale at 23°C±2
· Power supply：220V 1 piece of three-hole switch socket with three-position
· Computer requirements：standard configuration(Windows7,with nine-pin serial port)
· Others: (for calibration) 1 bottle of 40 L bottled nitrogen, purity above 99.999%, other gases are optional
· Drying vessel (all samples must be degassed and dehydrated for 24 hours)
· Distilled water or purified water
· Air compressor

MTEC-W201 Water Vapor Permeability Analyzer

Function

W201 Water Vapor Permeability Analyzer with electrolytic sensor method is for the water vapor transmission rate analysis of plastic film, composite film, sheet, metal foil and plastic, rubber, glass, bottle, bags, cans, boxes and other packaging containers.

Features

- Easy to use: can set the parameters, display the testing curve and report. The machine is with operation system, can operate independently(without computer).
- Temperature control: adopt international advanced electromagnetic temperature control technology, and the program stepping controlling system can control temperature elevating freely, without external accessories, temperature control precision accurate to 0.1 ℃.
- RH control: with double gas flow RH method control, with high precision.
- Sensor automatic protection
- Real time curves display of transmission rate, water vapour concentration, temperature and humidity; curves can be easily zoomed and moved.
- Precise enough to test high barrier materials like aluminum foil.
- Test either flat films or finished packages.

Standards

ASTM E398-2013

BS EN ISO 15106-3-2005

YBB 00092003-2015

GB/T 21529-2008

DIN 53122-2

Technical Specification

Items	Technical Parameters
Measurement range	0.001~100g/（m^2 · 24h）
Resolution ratio	0.001g/(m^2 · 24h)（film and sheet）
Temperature control accuracy	15℃~45℃（5~55℃optional）
Temperature control accuracy	±0.1℃
Humidity control range	0%RH，30~95%RH
Humidity control accuracy	±1%RH
Number of testing specimen	1 piece
Specimen dimension	Φ100mm, permeability area 50.24cm^2,
Specimen thickness	≤2mm
Carrier gas	99.999% Nitrogen
Carrier gas pressure	≥0.1Mpa

Configuration

Main machine body, software, communication cable, Φ100 sample cutter, 1/8 inch copper tube, sealing grease, clip connector, water injector, spanner, standard test plate, mouse

Users owned

User provide: nitrogen (99.999%), pressure releasing valve, computer
Optional (for purchase): test accessory, standard film, sealing grease, special clips, pressure releasing valve, computer

MTEC-W203 Water Vapor Permeability Analyzer

Function

W203 Water Vapor Permeability Analyzer with electrolytic sensor method is for the water vapor transmission rate analysis of plastic film, composite film, sheet, metal foil and plastic, rubber, glass, bottle, bags, cans, boxes and other packaging containers.

Features

- Easy to use: can set the parameters, display the testing curve and report. The machine is with operation system, can operate independently(without computer).
- Temperature control: adopt international advanced electromagnetic temperature control technology, and the program stepping controlling system can control temperature elevating freely, without external accessories, temperature control precision accurate to 0.1 ℃.
- RH control: with double gas flow RH method control, with high precision.
- A,B and C three chambers automatically switch test.
- Sensor automatic protection.
- Real time curves display of transmission rate, water vapour concentration, temperature and humidity; curves can be easily zoomed and moved.
- Precise enough to test high barrier materials like aluminum foil.
- Test either flat films or finished packages.

Standards

ASTM E398-2013

BS EN ISO 15106-3-2005

YBB 00092003-2015

GB/T 21529-2008

DIN 53122-2

Technical Specification

Items	Technical Parameters
Measurement range	0.001~100g/（m^2 · 24h）
Resolution ratio	0.001g/(m^2 · 24h)（film and sheet）
Temperature control accuracy	15℃~45℃（5~55℃ optional）
Temperature control accuracy	±0.1℃
Humidity control range	0%RH，30~95%RH
Humidity control accuracy	±1%RH
Number of testing specimen	3 piece
Specimen dimension	Φ100mm, permeability area 50.24cm^2,
Specimen thickness	≤2mm
Carrier gas	99.999% Nitrogen
Carrier gas pressure	≥0.1Mpa

Software Interface

Configuration

Main machine body, software, communication cable, Φ100 sample cutter, 1/8 inch copper tube, sealing grease, clip connector, water injector, spanner, standard test plate, mouse

Users owned

User provide: nitrogen (99.999%), pressure releasing valve, computer
Optional (for purchase): test accessory, standard film, sealing grease, special clips, pressure releasing valve, computer

MTEC-W301 & 303 Water Vapor Permeability Analyzer

Function

Designed with the principle of gravimetric method, use weight reduction method to test the water vapor transmission rate (WVTR) of packaging material,used in food industry, pharmaceutical industry, cosmetics, flexible packaging materials industry, university and inspection institutions. Computer automatic testing, controls temperature, humidity, recording temperature, humidity, weight, transmission rate curve, automatically judges at the end of test .

W301

W302

W303

Features

· Work independently by touch screen.
· High-precision sensors with over-range protection, continuous data collection, accurate and reliable data.
· Temperature system uses electronic technology intermittence control, highly precise.
· Uses the wet and dry gas ratio control humidity.
· Simple operation, with the function of parameter setting and error automatic correction function.
· Parameter coded lock: automatically lock the parameter while testing.
· Software real-time display each curve state: temperature, humidity, weight, permeation rate. With function of data storage, convenient for analysis the experimental results.
· Can be connected to computer through serial port; can export professional test report as Office Word or PDF.

Technical Specification

Items	W301	W303
Chamber	1	3
WVTR Test Range	0.01~10000 g/ m^2 · 24h	
Resolution ratio	0.001 g/ m^2 · 24h℃	
Test Temperature range	15℃~45℃	10℃~50℃
Test Temperature accuracy	±0.1℃	
Humidity range	dry method: 0~20%RH (optional: dual gas flow method: 30~90%RH)	
Humidity accuracy	±2%RH	
Test Sample thickness	≤2mm	
Test Sample Area	Φ90mm ,transmission area 50.24cm^2	
Sample qty	1piece	3piece
Power supply	AC 220V/50Hz	

Configuration

Mainframe, software, communication cable, sample cutter (Φ90mm), calibration weight (200g), permeation dish, desiccant, spanner, mouse
Optional Accessories for testing packaging containers, standard film, dual gas flow humidity controlling device, computer

Software Interface

Standards

- ASTM E96
- ASTM D1653
- GB/T 1037
- GB/T 16928
- ISO 2528
- YBB 00092003
- TAPPI T464
- DIN 53122-1
- JIS Z0208

MTEC-W403 Water Vapor Permeability Analyzer

Function

W403 Water Vapor Permeability Analyzer is using Infrared sensor method, Its a high precision testing equipment with machinery, electronics, software.Used in the water vapor permeability analysis of plastic film, composite film, sheet, metal foil and plastic, rubber, glass, bottle, bags, cans, boxes and other packaging container.

Features

- Three chambers can work independently at the same time; support cross-testing.
- Professional software with authority management and data tracking function, ensuring the safety and integrity of test data.
- Fully automatical test; auto judgment and auto stop.
- With built-in computer, carrying cutting-edge ARM controlling system can run independently without computer.
- LCD and windows instrument interface show testing data and working status; mouse operation is simple and convenient.
- Temperature control: International advanced electromagnetic technology, program controlled, and no need of external accessories. Precision: 0.1℃.
- Humidity control: Dual gas flow method, with broad range, high precision (1%RH) and stable flow.
- Precise enough to test high barrier material like aluminum foil.
- By adding package-testing accessories, can test various containers such as bag, pouch, bottle, can and bowl.
- Sensor over-range auto protection.
- Professional software with simple interface, easy to use and convenient to set test process.
- Real time curves display of transmission rate, water vapour concentration, temperature and humidity; curves can be easily zoomed and moved.
- Professional test report; can be exported as Office Word or PDF.

Standards

ASTM F1249
ISO 15106-2
GB/T26253
TAPPI T557
JIS K7129

Technical Specification

Items	Technical Parameters
Measurement range	0.001~100g/m^2 · 24h (film and sheet, with mask can be 0.1~1000 g/m^2 · 24h) 0.001~5g/pkg · d (package bag and bottle)
Resolution ratio	0.001g/m^2 · 24h (film and sheet) 0.00001g/pkg · d (package bag and bottle)
Temperature control accuracy	15℃~45℃ (5~55℃ optional)
Temperature control accuracy	±0.1℃
Humidity control range	dryness=0%RH, humidity=30~90%RH, 100%RH
Humidity control accuracy	±1%RH
Number of testing specimen	3 pcs
Specimen dimension	Φ100mm, permeability area 50.24cm^2,
Specimen thickness	≤2mm
Carrier gas	Nitrogen
Carrier gas pressure	≥0.1Mpa

Software Interface

Configuration

Main machine body, software, communication cable, Φ100 sample cutter, 1/8 inch copper tube, sealing grease, clip connector, water injector, spanner, standard test plate, mouse

Users owned

User provide: nitrogen (99.999%), pressure releasing valve, computer
Optional (for purchase): test accessory, standard film, sealing grease, special clips, pressure releasing valve, computer

MTEC-W501 Water Vapor Permeability Analyzer

Function

W501 water vapor permeability analyzer is to test the water vapor transmission rate (WVTR) of films or 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, 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.

Test Principle

Desiccant method(one of gravimetric/dish method). Fix the test sample in the middle of test chamber to separate the chamber into upper room and lower room; humid gas flows in upper room, and place desiccant device in lower room; as in lower room it remains dry (0-8%RH) by desiccant, water molecules penetrate through the sample from upper room into lower room, absorbed by desiccant; then the dish weight will increase; system weigh the increasing dish weight so as to calculate the water vapor transmission rate.

Software Interface

Technical Specification

Items	Technical Parameters
Test range	0.1~10000 g/m^2 · 24h
Test precision	0.001 g/m^2 · 24h
Weight range	0.1mg ~ 200g
Temperature range	15~55℃
Temperature accuracy	±0.1℃
Humidity range	30~90%RH，100%RH
Humidity accuracy	±1%RH
Test area	86.54 cm^2
Sample size	Φ125 mm

Items	Technical Parameters
Sample thickness	≤5mm
Number of test sample	1 piece
Interface size	1/8 inch metal pipe, Φ4mm polyurethane tube
Carrier gas &pressure	Compressed air≥0.2MPa
Instrument size	680×520×450mm
Weight	50kg
Power	750W
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)130543/4)of Water Vapor 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.
· Computer automatically monitors the whole test procedure: auto test, auto judgment, and auto stop.
· Curves display of transmission, water vapor concentration, temperature and humidity in real time and could zoom in and out. The curves with conceal function, support query function for background data.
· Professional test report; can be exported in Office or PDF formats easily.

Advanced technology

· Temperature control: International advanced electromagnetic technology, program controlled, auto heating and cooling; no need of external accessories. Precision: 0.1°C.
· Humidity control: Dual gas flow method(dry gas and humid gas), high precision (1%RH) and stable flow.
· Mainframe configures with color touch screen, can observe temperature, humidity and transmission and can run independently without external computer.
· Introduce multiple foreign advanced technologies, precision is as high as 0.001 g/m2•24h.
· Carry cutting-edge ARM controlling system, running independently without computer.
· Automatic over range protection.
· Humidity control utilizes proportioning dry and wet gas, perform excellently.

High efficiency

· With one test chamber, test rate is fast.
· High precision sensor, continuous weighing and data acquisition, so test data is reliable.
· By adding adaptive accessory, can test water vapor transmission of various containers such as bag, bottle, can and bowl.
· Can be expanded up to 10 Chambers.

Calibration & Certification

· The instrument supports two calibration methods, reference materials (standard PET films) method and weight method to calibrate and certificate; operation is simple, user only need use certified reference materials for normal testing, and then input the test result into the instrument interface.

Reliable and easy-maintenance instrument

· Adjustment parameters are managed by coded lock. The whole procedure is finished automatically.
· Sensor over-range protection, prevent damaging important sensors.
· Function modularization, easy to maintain.

Standards

ASTM E96/E96M-2016
ASTM D1653-2013
ISO 2528-1995
YBB00092003-2015
GB/T 1037-1988
GB/T 16928-1997
TAPPI T464
DIN53122-1
JIS Z0208-1976

Configuration

Water vapor permeability analyzer, Power cable, Communication cable Scale tray, Sample cutter, Sealing grease, Weight, 4A molecular sieve, Allen wrench, Drying vessel, Rubber pipe, Pipe throttle valve, Air pipe adaptor, Cross screwdriver, T-Cock, Reference material(PET film), Pressure regulator, Wooden box

Users owned
Computer, 1 piece of drying vessel, 3 pieces of 500-1000ml wide-mouth bottle(all samples must be degassed and dehydrated for 24 hours), Muffle furnace or drying device with temperature can reach 500°C, special desiccant for drying device (can use for several times after drying), Air supply through secondary filtration (separation of oil and water), air compressor (2.5HP, 8KG pressure), 5L first-class distilled water

MTEC-W533 Water Vapor Permeability Analyzer

Function

W533 water vapor permeability analyzer is to test the water vapor transmission rate (WVTR) of films or sheets materials.

Applied to:

1) Plastic films, composite films, aluminum foil, aluminized films, etc.
2) Sheets, panels, rubber, ceramic, etc.
3) Packaging containers, such as: glass, bottles, cans, boxes, etc.
4) Expanding application: solar panels, LCD films, medical patches, 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.

Test Principle

The test chamber is divided into upper and lower parts by test samples, there is humidity nitrogen flowing in upper chamber, and the lower chamber is equipped with a drying device. Water molecules diffuse through the sample to the lower chamber and are absorbed by the desiccant. The WVTR is calculated by measuring the increased weight of the drying device.

Software Interface

Technical Specification

Items	Technical Parameters
Test range	0.1~10000 g/m^2 · 24h
Test precision	0.001 g/m^2 · 24h
Weight range	0.1mg~200g
Temperature range	15~55℃
Temperature accuracy	±0.1℃
Humidity range	30~90%RH，100%RH
Humidity accuracy	±1%RH
Test area	86.54 cm^2
Sample size	Φ125 mm

Items	Technical Parameters
Sample thickness	≤5mm
Number of test sample	3 pieces
Interface size	Φ4mm polyurethane tube
Air pressure	≥0.2MPa
Instrument size	1680×500×375mm
Weight	160kg
Power	750W
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)130543/4) of Water Vapor 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.
· Computer automatically monitors the whole test procedure: auto test, auto judgment, and auto stop.
· Curves display of transmission, water vapor concentration, temperature and humidity in real time. The curves with conceal function, support query function for background data.
· Professional test report; can export file in PDF format.

Advanced technology

· Temperature control: International advanced electromagnetic technology, program controlled, auto heating and cooling; no need of external accessories. Precision: 0.1℃.
· Humidity control: Dual gas flow method(dry gas and humid gas), high precision (1%RH) and stable flow.
· Mainframe configures with color touch screen, can observe temperature, humidity and transmission and can run independently without external computer.
· Introduce multiple foreign advanced technologies, precision is as high as 0.001 $g/m^2 \cdot 24h$.

High efficiency

· Three chambers work independently with gravimetric method, each chamber has separate report; can run one chamber or two chambers or three chambers respectively.
· High precision sensor, continuous weighing and data acquisition, so test data is reliable.
· By adding adaptive accessory, can test water vapor transmission of various containers such as bag, bottle, can and bowl.
· Can be expanded up to 10 chambers.
· The only water vapor permeability analyzer with cup method that can test aluminum foil, aluminum laminated films and other high barriers materials in the industry.

Calibration & Certification

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

Reliable and easy-maintenance instrument

· Adjustment parameters are managed by coded lock. The whole procedure is finished automatically.
· Sensor over-range protection, prevent damaging important sensors.
· Function modularization, easy to maintain.

Standards

ASTM E96
ASTM D1653
ISO 2528
JIS Z0208
TAPPI T464
DIN53122-1

Configuration

Power cable, Communication cable Scale plate, Sample cutter, Sealing grease, Standard weight, 4A molecule sieve, Allen wrench, Cross screwdriver, Rubber pipe, Gas-pressure meter, Speed regulator valve, Air pipe adaptor, Reference material

Users owned
Computer, 1 piece of drying vessel, 3 pieces of 500-1000ml wide-mouth bottle(all samples must be degassed and dehydrated for 24 hours), Muffle furnace or drying device that temperature can up to 500°C, special desiccant for drying device (can use for several times after drying), Air supply through secondary filtration (separation of oil and water), such as air compressor (2.5HP, 8KG pressure), 2 bottles of 40 L bottled nitrogen, purity above 99.999%, 1 bottle is for spare, 5L first-class distilled water

MTEC-W401 2.0 Water Vapor Permeability Analyzer

Function

Based on the testing principle of the infrared sensor, W401 is designed and manufactured with reference to the standard of GB/T 26253. It is used to test the water vapor transmission rate of film or sheet materials.

Applied to: 1) Plastic film, composite film, aluminum foil, aluminized film,etc;
2) Sheet, panel, rubber, ceramics,etc;
3) Packaging containers, such as: bottle, pouch, bowl, etc;
4) Expanding application: solar panel, LCD film, medical patch, etc.

Test Principle

Infrared detection sensor method. Fix the test sample in the middle of test chamber to separate the chamber into upper room and lower room. When humid gas flows in upper room and dry gas in lower room, the water molecules in upper room penetrate through the sample into the dry gas, and electrolytic sensor system detect and analyze the water content and calculate the water vapor transmission rate.

Technical Specification

Items	Technical Parameters
Test range	0.002 ~ 500 g/(m2·24h)
Resolution	0.001 g/(m2·24h)
Temperature range	15 ~ 45℃
Temperature accuracy	±0.1℃
Humidity range	30 ~ 90%RH，100%RH
Humidity accuracy	±1%RH
Test area	50.24 cm2
Sample size	Φ100 mm
Sample thickness	≤3mm

Items	Technical Parameters
Number of test	1piece
Carrier gas	99.999% N2 (user provide)
Carrier gas pressure	≥0.1MPa
Carrier gas flow	5~100 mL/min
Carrier gas pressure	≥0.3MPa
Power	450W
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)130543/4) of Water Vapor 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.
· Real time curves display of temperature, humidity, transmission, flow and Voltage. 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 in real time.

Advanced technology

· Temperature control: International advanced electromagnetic technology, program controlled, auto heating and cooling; no need of external accessories. Precision: 0.1℃.
· Humidity control: Dual gas flow method(dry gas and humid gas), high precision (1%RH) and stable flow.
· Provide electronic signature function, online report submission and review functions.

High efficiency

· Single test chamber, fast data test.
· Measurement precise up to 0.001 g/m2·24h, can test high barrier materials, such as aluminum foil.

Authority management and data tracking

· The software is designed according to the requirements of the computerized system of the new GMP appendix.
· Require user name and password to log in to the workstation. Ensure that the account and experimental data are safe and effective.

Reliable and easy-maintenance instrument

· Our infrared sensor, with high precise and good performance, can work for a long time.
· Sensor over-range protection, prevent damaging important sensors.
· Functional modular design, easy to maintain.

Standards

ASTM F1249-2013
BS EN ISO 15106-2-2005
GB/T 26253-2010
YBB 00092003-2015
JIS K7129-2008

Configuration

Power cable, Communication cable Scale plate, Sample cutter, Sealing grease, Standard weight, 4A molecule sieve, Allen wrench, Cross screwdriver, Rubber pipe, Gas-pressure meter, Speed regulator valve, Air pipe adaptor, Reference material

MTEC-W405. 20 Water Vapor Permeability Analyzer

Function

W405 Water Vapor Permeability Analyzer is using infrared sensor method.
It is designed and manufactured according to GB/T 26253 standard.
W405 water vapor permeability analyzer is to test the water vapor

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, 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.

Test Principle

Infrared detection sensor method. Fix the test sample in the middle of test chamber to separate the chamber into upper room and lower room. When humid gas flows in upper room and dry gas in lower room, the water molecules in upper room penetrate through the sample into the dry gas, and electrolytic sensor system detect and analyze the water content and calculate the water vapor transmission rate. To test container, humid gas is outside and dry gas is inside of the container.

Technical Specification

Items	Technical Parameters
Test range	0.002 ~ 500 g/(m2·24h)
Test precision	0.001 g/(m2·24h)
Temperature range	15 ~ 45℃
Temperature accuracy	±0.1℃
Humidity range	Dryness=0%RH, humidity (30 ~ 90) %RH, 100%RH
Humidity accuracy	±1%RH
Test area	50.24 cm2
Sample size	Φ100 mm
Sample thickness	≤3mm

Items	Technical Parameters
Number of test sample	3 pcs
Carrier gas	99.999%N2 (user provide)
Carrier gas pressure	≥0.1MPa
Carrier gas flow	5~100 mL/min
Power	750W
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)130543/4）of Water Vapor 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.
·Professional test report; can be exported as PDF.

Advanced technology

· Temperature control: International advanced electromagnetic technology, program controlled, auto heating and cooling; no need of external accessories. Precision: 0.1℃.
· Humidity control: Dual gas flow method (dry gas and humid gas), high precision (1%RH) and stable flow.
· Provide electronic signature function, online report submission and review functions.

High efficiency

· Three independent test chambers: With three sensors and each chamber test independently, three same/different samples can be tested at the same time and output three test reports, which improve test efficiency.
· Measurement precise up to 0.001 g/m2·24h, can test high barrier materials, such as aluminum foil.
· By adding adaptive accessory, can test water vapor transmission of various containers such as bag, bottle, can and bowl.

Authority management and data tracking

· The software is designed according to the requirements of the new GMP Appendix computerized system.
·Need a user name and password to log in to the workstation, and ensure the safety and effectiveness of account and experiment data.

Reliable and easy-maintenance instrument

· Our infrared sensor, with high precise and good performance, can work for a long time.
· Sensor over-range automatic protection, prevent damaging important sensors while instrument failure.
· Functional modular design, easy to maintain.

Standards

ASTM F1249-2013ASTM
BS EN ISO 15106-2-2005
GB/T 26253-2010
YBB 00092003-2015
JIS K7129-2008

Configuration

Power cable, Communication cable Scale plate, Sample cutter, Sealing grease, Standard weight, 4A molecule sieve, Allen wrench, Cross screwdriver, Rubber pipe, Gas-pressure meter, Speed regulator valve, Air pipe adaptor, Reference material

MTEC-W413. 20 Water Vapor Permeability Analyzer

Function

W413 water vapor permeability analyzer is designed to test the water vapor transmission rate (WVTR) of films or sheets materials.transmission rate (WVTR) of films or 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, 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.

Test Principle

water vapor permeability analyzer adopts the principle of infrared method. The pre-treated specimen is fixed in the middle of the test chamber, and the test chamber is divided into two chambers, the nitrogen gas with relatively stable humidity flows in the upper chamber of the film and the dry nitrogen gas flows in the lower chamber, due to the existence of humidity gradient, the water vapor will diffuse from the high humidity chamber through the film to the low humidity chamber, the water vapor through the specimen is carried to the infrared sensor by the flowing dry nitrogen gas, and the electrical signal output from the sensor is used to derive the water vapor transmission rate of the specimen. Water vapor transmission rate and other parameters

Technical Specification

Items	Technical Parameters
Test range	0.002~1000 g/m2·24h
Test precision	0.001 g/m2·24h
Temperature range	15~45℃(15~60℃ optional)
Temperature accuracy	±0.1℃
Humidity range	0%, 30~90%RH，100%RH
Humidity accuracy	±1%RH
Test area	50.24 cm
Sample size	Φ100 mm
Sample thickness	≤3mm

Items	Technical Parameters
Number of test sample	1~3 pieces
Carrier gas	99.999% N2 (user provide)
Carrier gas pressure	≥0.1MPa
Carrier gas flow	5~100 mL/min
Pneumatic pressure	≥0.3MPa
Instrument size	700×560×370mm
Weight	80kg
Power	750W
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)130543/4）of Water Vapor 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.
·Professional test report; can be exported as PDF.

Advanced technology

· Temperature control: International advanced electromagnetic technology, program controlled, auto heating and cooling; no need of external accessories. Precision: 0.1℃.
· Humidity control: Dual gas flow method (dry gas and humid gas), high precision (1%RH) and stable flow.
· Provide electronic signature function, online report submission and review functions.

High efficiency

· Three independent test chambers: With three sensors and each chamber test independently, three same/different samples can be tested at the same time and output three test reports, which improve test efficiency.
· Measurement precise up to 0.001 g/m2·24h, can test high barrier materials, such as aluminum foil.
· By adding adaptive accessory, can test water vapor transmission of various containers such as bag, bottle, can and bowl.

Authority management and data tracking

· The software is designed according to the requirements of the new GMP Appendix computerized system.
·Need a user name and password to log in to the workstation, and ensure the safety and effectiveness of account and experiment data.

Reliable and easy-maintenance instrument

· Our infrared sensor, with high precise and good performance, can work for a long time.
· Sensor over-range automatic protection, prevent damaging important sensors while instrument failure.
· Functional modular design, easy to maintain.

Standards

GB/T 26253-2010
YBB 00092003-2015
BS EN ISO 15106-2-2005
YBB 00092003-2015
ASTM F1249-2013

Configuration

Power cable, Communication cable Scale plate, Sample cutter, Sealing grease, Standard weight, 4A molecule sieve, Allen wrench, Cross screwdriver, Rubber pipe, Gas-pressure meter, Speed regulator valve, Air pipe adaptor, Reference material

MTEC-W301. 20 Water Vapor Permeability Analyzer

Function

W301 water vapor permeability analyzer is designed to test the water vapor transmission rate (WVTR) of films or sheets materials with the principle of Gravimetric Method.

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, 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.

Test Principle

Control the temperature of the electric heater in the inner side of the chamber through temperature controlling system. With the chamber temperature increased, the water in the test dish evaporates, and the evaporated water vapor is absorbed by desiccant in the upper lid of the chamber. By measuring the weight variation of the water in the dish, user can derive water vapor transmission rate and other parameters.

Technical Specification

Items	Technical Parameters
Test range	0.1 ~ 10000 g/(m2·24h)
Test precision	0.001 g/(m2·24h)
Temperature range	15 ~ 55℃
Temperature accuracy	±0.1℃
Humidity range	dry method: ≤10%RH
Humidity accuracy	±1%RH
Test area	50.24 cm2
Sample size	Φ90 mm
Sample thickness	≤3mm

Items	Technical Parameters
Number of test sample	1 piece
Power	450W
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)130543/4）of Water Vapor 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.
· Curves display of transmission, water vapor concentration, temperature and humidity in real time. The curves with conceal function, support query function for background data.
·Professional test report; can be exported as PDF.

Advanced technology

· Temperature control: International advanced electromagnetic program step temperature control technology, auto heating and cooling; no need of external accessories. Precision: 0.1℃.
· Using international advanced technologies, the accuracy can reach 0.001 g/m2·24h.

High efficiency

· One independent test chambers: with fast test efficiency.
· High precision sensor, continuous weighing and collecting data. Test data is accurate and reliable.
· Add additional adapting piece, being able to test bag, bottle, bowl, and other packaging containers.
· Which can test aluminum foil, laminated films and other high barriers materials in the industry.

Authority management and data tracking

· The software is designed according to the requirements of the new GMP Appendix computerized system..
·Need a user name and password to log in to the workstation, and ensure the safety and effectiveness of account and experiment data.

Reliable and easy-maintenance instrument

· Sensor over-range automatic protection, prevent damaging important sensors while instrument failure.
· Functional modular design, easy to maintain.

Standards

GB/T 1037-1988
GB/T 16928-1997
ASTM E96/E96M-2016
ASTM D1653-2013
TAPPI T464
ISO 2528-1995
DIN53122-1
JIS Z0208-1976
YBB00092003-2015

Configuration

Power cable, Communication cable Scale plate, Sample cutter, Sealing grease, Standard weight, 4A molecule sieve, Allen wrench, Cross screwdriver, Rubber pipe, Gas-pressure meter, Speed regulator valve, Air pipe adaptor, Reference material

MTEC-W303. 20 Water Vapor Permeability Analyzer

Function

W303 water vapor permeability analyzer is to test the water vapor transmission rate (WVTR) of films or 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, 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.

Test Principle

Control the temperature of the electric heater in the inner side of the chamber through temperature controlling system. With the chamber temperature increased, the water in the test dish evaporates, and the evaporated water vapor is absorbed by desiccant in the upper lid of the chamber. By measuring the weight variation of the water in the dish, user can derive water vapor transmission rate and other parameters.

Technical Specification

Items	Technical Parameters
Test Range	0.1~10000 g/m2·24h
Test precision	0.001 g/(m2·24h)
Temperature range	15 ~ 55 °C
Temperature accuracy	± 0.1 °C
Humidity range	≤10%RH Desiccant Method
Humidity accuracy	±1%RH
Test area	50.24 cm2
Sample size	Φ90 mm
Sample thickness	≤3mm

Items	Technical Parameters
Number of test sample	3 pieces
Instrument size	/
Weight	/
Power	1300W
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)130543/4) of Water Vapor 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.
· Four sets of curves of temperature, humidity, weight, and water vapor transmission are displayed in real time. The curves support preview and hide function and support background database query function.
· With loading professional test report; can be exported as PDF.

Advanced technology

· Temperature control: International advanced electromagnetic program step temperature control technology, auto heating and cooling; no need of external accessories. Precision: 0.1℃.
· Configure with color touch screen, can observe temperature, humidity and transmission and run independently without external computer.
· Adopt international advanced technology, test accuracy reaches 0.001 g/(m2·24h).

High efficiency

· Three independent test chambers with three sensors: Each chamber test independently, three same/different samples can be tested at the same time and output three test reports. Each chamber can set different temperature , judge method and other parameters.
· High precision sensor, continuous weighing and collecting data. Test data is accurate and reliable.
· Equipped with accessories if request, being able to test bag, bottle, bowl, and other packaging containers.
· Can test aluminum foil, aluminum film and other high barrier materials cup method water vapor transmittance tester.
· Can be expanded to 12 chambers at most.

Access control and data tracking

· The software is designed according to the requirements of the new GMP Appendix computerized system.
·Need a user name and password to log in to the workstation, and ensure the safety and effectiveness of account and experiment data.

Reliable and easy-maintenance instrument

· Sensor over-range automatic protection, prevent damaging important sensors while instrument failure.
· Functional modular design, easy to maintain.

Calibration & Certification

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

Standards

GB/T 1037-1988
GB/T 16928-1997
ASTM E96/E96M-2016
ASTM D1653-2013
TAPPI T464
ISO 2528-1995
DIN53122-1
JIS Z0208-1976
YBB00092003-2015

Configuration

Power cable, Communication cable Scale plate, Sample cutter, Sealing grease, Standard weight, 4A molecule sieve, Allen wrench, Cross screwdriver, Rubber pipe, Gas-pressure meter, Speed regulator valve, Air pipe adaptor, Reference material

MTEC-Y110 Oxygen Permeability Analyzer

Features

- Adopts international advanced electromagnetic temperature control technology can control temperature rising and lowering without any external accessory. Temperature control accuracy reach 0.01℃
- The humidity control adopts double air humidity control method, humidity control area is large and with high accuracy.
- It has two calibration methods :standard gas calibration and standard film calibration.
- LCD and windows instrument interface show testing data and working status in real time.
- Judge and stop automatically.
- With leakage auto protection function.
- The software operation is easy, all testing program is automatic. It records the curves automatically of the permeation rate, oxygen concentration, humidity and temperature. Continuous display. Can monitor the mutual influence between the parameters.
- Can test high permeability films (such as contact lenses) with additional testing fixture.
- Can test the oxygen permeability of packaging bags or bottles with special fixture

Function

Y110 is applicable for testing the oxygen transmission property of plastic film, sheet and plastic bottles and bags in air or pure oxygen.

Standards

ASTM D 3985
ASTM F 1927
ASTM F 1307
ISO 15105-2
YBB00082003
GB/T 19789-2005
DIN 53380-3
JIS K-7126-B

Technical Specification

Items	Technical Parameters
Test Range	0.02~16,500 $cm^3/m^2/day$ (with special mask, the max testing range can reach 260000$cm^3/m^2/day$)
Test Accuracy	0.001 cm^3 / (m^2 · 24h)
Temperature Control Range	15℃~45℃ (5~55℃ optional)
Temperature Accuracy	±0.1℃
Humidity Range	0%RH, 30~90%RH, 100%RH
Humidity Accuracy	±2%RH
Specimen Size	Φ100mm
Test Area	50.24cm^2
Specimen Thickness	≤2mm
Numbers of Specimen	1 piece
Inlet Size	1/8 metal pipe
Pressure	0.1~0.2MPa
Testing environment	ambient temperature (Standard conditions 23℃)

Software Interface

Configuration

Main machine body, software, communication cable, Φ100 sample cutter, 1/8 inch copper tube, sealing grease, clip connector, water injector, spanner, standard test plate

Users owned

User provide: nitrogen (99.999%), oxygen (99.999%), pressure releasing valve, computer
Optional (for purchase): test accessories, standard film, sealing grease, special clips, pressure releasing valve, computer

MTEC-Y310 Oxygen Permeability Analyzer

Features

- Professional software with authority management and data tracking function, ensuring the safety and integrity of test data.
- With built-in computer, carrying cutting-edge ARM controlling system-can run independently without computer.
- Three chambers can work independently at the same time; support c ross-testing.
- Fully automatical test; auto judgment and auto stop.
- LCD and windows instrument interface show testing data and working status; mouse operation is simple and convenient.
- Temperature control: International advanced electromagnetic technology, program controlled, and no need of external accessories. Precision: 0.1℃.
- Humidity control: Dual gas flow method, with broad range, high precision (2%RH) and stable flow.
- Precise enough to test high barrier material like aluminum foil.

Function

Y310 Oxygen Permeability Analyzer is for testing the oxygen transmission rate (OTR) of packaging materials, such as plastic film, composite film, coextrusion film, aluminum-plated film, aluminum foil, infusion bag, sheets, solar battery panel, cellophane, ceramics and porcelain, and various containers such as bag, pouch, bottle, can, bowl, box, widely used in the industries of food, pharmaceuticals, personal care, inspection agencies and so on.

Standards

ASTM D3985
ASTM F2622
ASTM F1927
ASTM F1307
ISO 15105-2
YBB00082003-2015
GB/T 19789-2005
DIN 53380-3
JIS K-7126

Technical Specification

Items	Technical Parameters
Test Range	0.02~16500 $cm^3/(m^2 \cdot 24h)$ (film), 0.0001~10 $cm^3/(pkg \cdot 24h)$ (container)
Test Accuracy	0.001 $cm^3/(m^2 \cdot 24h)$ (film), 0.0001 $cm^3/(pkg \cdot 24h)$ (container)
Temperature range	15 ~ 45℃
Temperature Accuracy	±0.1℃
Humidity range	dryness: 0%RH; humidity:30~90%RH, 100%RH
Humidity accuracy	±2%RH
Number of test sample	1~3 pcs
Test area	50.24cm^2 (minimum 0.785cm^2 optional)
Sample size	Φ100mm
Sample thickness	≤ 2mm

Software Interface

Configuration

Main machine body, software, communication cable, Φ100 sample cutter, 1/8 inch copper tube, sealing grease, clip connector, water injector, spanner, standard test plate

Users owned

User provide: nitrogen (99.999%), oxygen (99.999%), pressure releasing valve, computer
Optional (for purchase): test accessories, standard film, sealing grease, special clips, pressure releasing valve, computer

MTEC-Y310 2.0 Oxygen Permeability Analyzer

Function

Y310 2.0 Oxygen Permeability Analyzer is based on the test principle of the Coulomb oxygen analysis sensor and is designed and manufactured with reference to the ASTM D 3985 standard. It is used to determine the oxygen transmission rate (quantity) of film or sheet materials

Features

- Our company has approved and issued by the "General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China". Gas Permeability Tester "National Standard Material Classification Certificate" and "National Standard Material" Manufacturing Measuring Instruments License (GBW(E)130541/ 2). Use national standard materials to calibrate and verify the instrument to ensure the accuracy, versatility and authority of the test data.ensuring the safety and integrity of test data.
- Professional software with simple interface, easy to use and flexibly to set test process.
- Support electronic signature function, online report submission and review.
- The measurement accuracy is up to 0.001 cm3/(m2·24h), and it can measure high-barrier materials such as aluminum foil.
- It has audit tracking function (test tracking and log tracking), and each data change is recorded; Ensure the safety and integrity of test data.
- Functional modular design, easy to maintain.
- Temperature control: Adopting the international advanced electromagnetic program stepping temperature control technology, automatic heating and cooling; high measurement accuracy, accurate to 0.1 ℃

Standards

ASTM D3985
ASTM F2622
ASTM F1927
ASTM F1307
ISO 15105-2
JIS K-7126-B
DIN 53380-3

Technical Specification

Items	Technical Parameters
Test Range	0.02~16500 $cm^3/(m^2 \cdot 24h)$ (film), 0.0001~10 $cm^3/(pkg \cdot 24h)$ (container)
Test Accuracy	0.001 $cm^3/(m^2 \cdot 24h)$ (film), 0.0001 $cm^3/(pkg \cdot 24h)$ (container)
Temperature range	15 ~ 45℃
Temperature Accuracy	±0.1℃
Humidity range	dryness: 0%RH; humidity:30~90%RH, 100%RH
Humidity accuracy	±2%RH
Number of test sample	1~3 pcs
Test area	50.24cm^2 (minimum 0.785cm^2 optional)
Sample size	Φ100mm
Sample thickness	≤ 2mm

Test Principle

Y310 2.0 adopts coulometry sensor method. Fix the test sample in the middle of test chamber to separate the chamber into upper room and lower room. When high purity O2 flows in upper room and high purity N2 in lower room, the O2 molecules in upper room penetrate through the sample into lower room, carried to the sensor by carrier gas, and the sensor system detect and analyze the O2 density to determine oxygen transmission rate. The unit is OTR(cm3/m2.24h) or ppm. To test packaging container, oxygen is outside and nitrogen is inside of the container.

Configuration

Main machine body, software, communication cable, Φ100 sample cutter, 1/8 inch copper tube, sealing grease, clip connector, water injector, spanner, standard test plate

Users owned

User provide: nitrogen (99.999%), oxygen (99.999%), pressure releasing valve, computer
Optional (for purchase): test accessories, standard film, sealing grease, special clips, pressure releasing valve, computer

MTEC-N500 Gas Permeability Analyzer

Features

- Adopt internationally advanced method pressure differential method as working principle.
- It can test high barrier material, for instance aluminum foil, ceramic and etc.
- Automatic test, user friendly, non-maintenance design;
- Two test mode of high barrier material and low barrier material, wide measurement range, high precision ;
- Superior components, accurate test result, high stability;
- Automatically increase and decrease temperature, no special requirements to the environment;
- All parameters display on the real time;
- Multi-level security protection design, excellent performance , and sustainable operation;
- It can calibrate by standard film and pressure

Function

N500 gas permeability analyzer is to test the gas (O_2, N_2, CO_2 etc) transmission rate (GTR) of packaging materials, films and sheets materials.

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.

Standards

ASTM D1434
ISO 2556
ISO 15105-1-2007
YBB00082003
JIS K7126-A

Technical Specification

Items	Technical Parameters
Testing range	0.02~50000cm^3/(m^2 · day · 0.1MPa)Max possibility by expanding the volume: 600000 cvm³/ (m²·24h·0.1MPa)
Test accuracy	0.001 cm^3/ (m^2 · 24h · 0.1MPa)
Testing temperature range	15 ~ 60℃
Temperature precision	±0.01℃
Humidity Range	0%RH，30~90%RH，100%RH
Controlled RH accuracy	±2%RH
Vacuum resolution	0.01Pa
Vacuum degree	<20Pa
Test pressure	-0.1~+0.1MPa
Test pressure	O_2、CO_2、N_2 etc.
Sample thickness	≤2mm
Gas source pressure	0.2 ~ 0.8MPa
Sample area	Φ110mm
Power supply	220V AC，50HZ

Software Interface

Configuration

Main machine body, software, 110 sample cutter, 1/8 inch copper tube, sealing grease, gas pipe connector, filter paper, spanner, communication cable.

Users owned

Nitrogen (99.999%), oxygen (99.999%), carbon dioxide (99.999%), pressure releasing valve, computer, vacuum pump.

MTEC-N530 Gas Permeability Analyzer

Features

- Three chambers can work independently at the same time for three different samples.
- Professional pressure sensor, precise and stable.
- Fully automatical test; auto judgment and auto stop.
- First one in the world that can automatically keep pressure difference
- The sample can be tested by single cell, or double cells or three cells .
- Adaptable to environment, not affected by environment temperature.
- Temperature control: International advanced electromagnetic technology, program controlled, automatic temperature rise and fall, speed adjustable. Precision 0.01℃.
- Applicable to high barrier, middle barrier and low barrier material; precise enough to test high barrier material like aluminum foil.
- Real time curves display of transmission rate, pressure, pressure difference and temperature, curves can be easily zoomed and moved.
- Adaptable to environment, not affected by environment temperature.
- Modularized design can run for a long time, with auto over pressure protection function.
- By adding adaptive accessory, can expend upper limit of test range to 600000 cm^3/m^2 • 24h • 0.1MPa.
- Modularized design can run for a long time, with auto over pressure protection function.
- Professional software with simple interface, easy to use and convenient to set test process.
- Real time curves display of transmission rate, pressure, pressure difference and temperature, curves can be easily zoomed and moved.
- Standard film calibration and pressure calibration.
- Professional test report; can be exported as Office Word or PDF.

Function

N530 for the detection of gas permeability of various films, infusion bags and other packaging materials for O2, CO2, N2 and other Non-inflammable gas and non-corrosive gases through the barrier properties. It has three independent testing chambers and independent temperature control systems. The core is connected with computer through the USB. It can automatically judge and stop testing. The testing result is stable, curves of permeability rate ,temperature, pressure and pressure difference will be shown at the same time. The test report will generate automatically while the data automatically stored. It also support TCP/IP protocol. There are three measuring range that can be enlarged.

Standards

ASTM D1434
ISO 2556-1974
ISO15105-1-2007
JIS K7126-1-2006

Technical Specification

Items	Technical Parameters
Testing range	0.02~50000 cm³/（m²•24h•0.1MPa）Max possibility by expanding the volume 600000 cm³/（m²•24h•0.1MPa）
Test accuracy	0.001 cm3/（m2•24h•0.1MPa）
Testing temperature range	15 ~ 60℃
Temperature precision	±0.1℃
Controlled RH accuracy	±2%RH
Vacuum resolution	0.01Pa
Vacuum degree	<20Pa
Sample number	3pcs
Sample thickness	≤2mm
Test gas	O_2、CO_2、N_2 etc
Test pressure	-0.1 ~ +0.1MPa
Sample area	Φ110mm
Test area	50.24cm^2
Dimension	800mmx560mmx400mm
Power supply	220V AC，50HZ

Software Interface

Configuration

Main machine body, software, Φ110 sample cutter, 1/8 inch copper tube, sealing grease, gas pipe connector, filter paper, spanner, communication cable

Users owned

Nitrogen (99.999%), oxygen (99.999%), carbon dioxide (99.999%), pressure releasing valve, computer, vacuum pump

MTEC-N600 Battery Diaphragm Air Permeability Tester

Function

To test the air permeability of the battery diaphragm.

Principle

Gurley Method: To measure the time taken to pass 100 ml of gas at a constant pressure difference of 1.23 kpa.

Schopper Method: Select the appropriate test duration and determine the air flow rate through the sample by measuring the volume under the constant pressure difference of 1.00 KPa±0.01KPa or 2.50±0.01KPa

Bendtsen method: At a constant pressure difference of 1.47KPa, the air flow through the test surface was recorded after clamping for 5s.

Features

- The three test methods: Gurley method, Schopper Method, and Bendtsen method are integrated into one machine for users to choose freely to meet the test needs of different users.
- The pressure difference of the instrument is adjustable in the range of 0-3KPa, and the accuracy is 0.01KPa, which fully meets the test pressure requirements of the three methods.
- The instrument has a large test volume of 1L, which fully meets the volume requirements of the three methods.
- Free conversion between test area 10.0cm²and 6.42cm²by adding a mask.
- The instrument comes with a temperature and humidity sensor to monitor the temperature and humidity of the test chamber in real time.
- The instrument has good sealing performance and the air leakage volume does not exceed 1.0ml / h.
- The instrument comes with a display screen and PC software, which can be operated offline or connected to a computer for simultaneous testing.

Technical Specification

Item	Specification
Testing Range	0.01-2.5um/(Pa.s)
Resolution Ratio	0.001um/(Pa.s)
Differential Pressure	0-300Pa
Sample thickness	<=10mm
Instrument Dimensions	L×W×H: 500mm×400mm×300mm
Power	100w
Power Source	220V,50Hz

Configuration

Battery diaphragm air permeability tester, computer, oilless air compressor, pressure maintaining valve, mask, airtube , power line line of communication, mouse, sampling board

Standards

SJ_T 10171-2016

GB/T 458-2008

GB/T 36363-2018

MTEC-N900 Textile Air Permeability Analyzer

Features

- Cylinder control and fix the sample automatically, quick test.
- Pressure adjustable; auto measure, auto calculate results.
- Mainframe configures color touch screen, without external computer, can observe the permeability rate of the sample in real-time.
- Can test multiple sets of data continuously; can query, delete a group or groups of experimental results, print reports.
- Professional software, simple interface, easy to operate, display test data (air permeability, variation coefficient and other parameters) in real time, support different unit conversion. (Test unit: mm/s, l/(dm^2.min), l/(m^2.s), m^3/(m^2.min), m^3/(m^2.h), cfm, cm^3/(cm^2.h), ml/s, ml/min, l/s, l/min)
- Generate standard test report automatically, details contain sample name, specifications, serial number, the direction of the airflow through the fabric, test area and the pressure drop of the experiment, standard, test dates, and test results (air permeability rate, variation coefficient, 95% confidence interval).

Function

N900 Textile Air Permeability Analyzer a blend of mechanism, electron and software, is high precision experiment-usage testing instrument developed by GB/T5453-1997 Textile--Determination of the air permeability of fabrics. It is suitable for testing the air permeability of various textile fabrics, including industrial fabrics, non-woven fabrics and other breathable textile products. High precision sensor is adopted to replace the traditional water column differential pressure test. LCD display and touch screen operation are adopted. The test parameters are set by numbers, which is convenient and fast. The built-in micro-control system calculates the test data and prints the test results, eliminating manual conversion. The instrument is equipped with a computer interface, making the operation simple and easy, with higher accuracy and efficiency.

Technical Specification

Items	Technical Parameters
Pressure differential measurement range	1 ~ 4000Pa (pressure drop can be adjusted)
Test range	1 ~ 40000mm/s
Test error	≤±2%
Sample size	150mm×150mm
Test area	5cm², 20cm², 50 cm², 100 cm²
Sample thickness	≤10mm
Instrument size	640×380×865mm (L×W×H)
Weight	70KG
Power supply	AC 220 V , 50 Hz

Instrument Installation

Power Supply

Connect the power supply, power supply should meets the following requirements:

Voltage：380V±10V；Frequency:50 Hz；

Rated power：2000W

5.2 RS232Serial Port

The instrument connect to computer by RS232 port.

1. If the computer has RS232 port, connect the instrument to computer by communication cable when computer is power off. No need to do extra setting.

2. If the computer didn’ t have a RS232 port, must expand device to obtain RS232 port. To do this, make some settings as per following procedure:

1) Right click "control panel", click “system” and choose “Device Manager”；

2) Click "communication port（COM1）"to enter its “Properties” interface.

3) Click “ Advanced” ,pop up “Advanced settings for COM1”

4) Click “COM Port” to choose “COM1”

Configuration

Battery diaphragm air permeability tester, computer, oilless air compressor, pressure maintaining valve, mask, airtube , power line line of communication, mouse, sampling board

MTEC-N500 2.0 GAS Permeability Analyzer

Function

Based on the test principle of the differential pressure method, N530 is designed with reference to the GB/T 1038 standard and used to test the gas transmission rate (quantity) of film or sheet materials.

Applied to:

1) Plastic film, composite film, aluminum foil, aluminized film, etc.;

2) Various sheets, plates, rubber, ceramics, etc.;

3) Packaging containers, such as bottles, bags, bowls, etc.;

4) Others applications, such as solar backplanes, liquid crystal display films, medical patches, etc. Used in quality inspection, drug inspection, scientific research, packaging, film, food, medicine, daily chemical products, electronic and other industries.

Features

- Our company has approved and issued by the "General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China". Gas Permeability Tester "National Standard Material Classification Certificate" and "National Standard Material" Manufacturing Measuring Instruments License (GBW (E)130541/ 2). Use national standard materials to calibrate and verify the instrument to ensure the accuracy, versatility and authority of the test data.
- Professional test report, automatically generate and can be exported in PDF format.
- Single test cavity, fast data test rate.
- Measurement precision up to 0.01 cm3/ (m2·24h·0.1MPa) , can test high barrier materials, such as aluminum foil.
- Professional pressure sensor with high precision, good stability, can run for a long time.
- Functional Modular design, easy to maintain.and test results (air permeability rate, variation coefficient, 95% confidence interval).

Standards

GB/T 1038-2000

ISO 2556-1974

ISO 15105-1-2007

GB/T 36363-2018

ASTM D1434

YBB00082003-2015

Technical Specification

Items	Technical Parameters
Testing range	0.02 ~ 50000 cm3/（m2·24h·0.1MPa）
Testing accuracy	0.001 cm3/（m2·24h·0.1MPa）
Testing temperature range	15 ~ 60℃
Temperature precision	±0.1℃
Vacuum degree	＜20Pa
Vacuum resolution	0.01Pa
Test pressure	0.1MPa
Test gas	O2, CO2, N2, etc
Through area	50.24 cm2
Sample size	Φ110 mm
Sample thickness	≤2mm
Number of samples	1 pc
Power	450W
Power supply	AC 220V, 50Hz

Working Principle

Differential-pressure method. Fix the test sample between the upper chamber and lower chamber, vacuumize the whole gas circuit by vacuum pump, and add some experimental gas in upper chamber to generate constant differential pressure. The gas molecules penetrate through the sample from higher pressure room into lower pressure room, then the system monitor the pressure change in lower pressure room and calculate the gas transmission rate

Configuration

Power cable,Communication cable,Special spanner
Sample cutter ,Rubber pipe ,Gas connector,Sealing grease,Reference material,Screwed joint

MTEC-N530 2.0 Gas Permeability Analyzer

Function

Based on the test principle of the differential pressure method, N530 is designed with reference to the GB/T 1038 standard and used to test the gas transmission rate (quantity) of film or sheet materials.

Applied to:

1) Plastic film, composite film, aluminum foil, aluminized film, etc.;
2) Various sheets, plates, rubber, ceramics, etc.;
3) Packaging containers, such as bottles, bags, bowls, etc.;
4) Others applications, such as solar backplanes, liquid crystal display films, medical patches, etc.

Used in quality inspection, drug inspection, scientific research, packaging, film, food, medicine, daily chemical products, electronic and other industries.

Features

- Cylinder control and fix the sample automatically, quick test.
- Pressure adjustable; auto measure, auto calculate results.
- Mainframe configures color touch screen, without external computer, can observe the permeability rate of the sample in real-time.
- Can test multiple sets of data continuously; can query, delete a group or groups of experimental results, print reports.
- Professional software, simple interface, easy to operate, display test data (air permeability, variation coefficient and other parameters) in real time, support different unit conversion. (Test unit: mm/s, l/(dm^2.min), l/(m^2.s), m^3/(m^2.min), m^3/(m^2.h), cfm, cm^3/(cm^2.h), ml/s, ml/min, l/s, l/min)
- Generate standard test report automatically, details contain sample name, specifications, serial number, the direction of the airflow through the fabric, test area and the pressure drop of the experiment, standard, test dates, and test results (air permeability rate, variation coefficient, 95% confidence interval).

Standards

GB/T 1038-2000

ISO 2556-1974

ISO 15105-1-2007

ASTM D1434

JIS K7126-1-2006

YBB00082003-2015

Technical Specification

Items	Technical Parameters
Testing range	0.02 ~ 50000 cm3/ (m2·24h·0.1MPa)
Testing accuracy	0.001 cm3/ (m2·24h·0.1MPa)
Testing temperature range	15 ~ 60℃
Temperature precision	±0.1℃
Vacuum degree	＜20Pa
Vacuum resolution	0.01Pa
Test pressure	0.1MPa
Test gas	O2, CO2, N2 etc.
Test area	50.24 cm2
Sample size	Φ110 mm
Sample thickness	≤2mm
Number of samples	3 pcs
Power	750W
Power supply	AC 220V, 50Hz

Working Principle

Adopt pressure differential method. Fix the test sample in the middle of test chamber to separate the chamber into upper room and lower room, between which there is a constant pressure difference. The gas molecules penetrate through the sample from higher pressure room into lower pressure room, then the system monitor the pressure change in lower pressure room and calculate the gas transmission rate.

Configuration

Power cable,Communication cable,Special spanner
Sample cutter ,Rubber pipe ,Gas connector,Sealing grease,Reference material,Screwed joint

MTEC-ZF1800 Full-automatic Total Migration Tester

Function

ZF1800 Full-automatic Total Migration Tester suitable for various utensils, containers, food packaging films, cans or other various food tools, pipes and other products made of polyethylene, polystyrene, polypropylene, and perchloroethylene resin in different soaking solutions. Through the determination of evaporation residues, the analysis of leaching indicators is performed to meet the different needs of product applications.

Technical Specificatio

Items	Technical Parameters
Test range	0.2mg/dm2-167000mg/dm2
Resolution	0.0001 g/dm2
Scale Technical Parameters	Measurement range：0~200g；resolution：0.1mg
Temperature control range of water bath	Room temperature~100℃
Temperature control range of heating box	Room temperature~117.9℃
Temperature control range of cooling box	10-35℃
Temperature control accuracy	±0.5℃
Quantity of samples	1-18 pcs（with independent data）
Evaporation dish volume	0-200mL
Dimensions	L×W×H:178cm×93cm×145cm
Size of recycling system	L×W×H:120cm×88cm×170cm
Power supply	220V,50Hz
Power	5000W

Features

Features of independent hot and cold cavity system

Cold and hot dual cavity independent, one cavity warms up and one cavity cools down, saving cold and heat exchange time.

Unique design with automatic temperature control and dehumidification.

Temperature and humidity can be controlled during weighing. Ensure the consistency of the ambient temperature and humidity during each weighing.

Temperature control range: water bath temperature control range: room temperature to 100 ℃; heating box temperature control range: room temperature to 117.9 ℃; cooling box temperature control range: normal temperature; cavity temperature uniformity: ± 5 ℃

Features of the water bath built-in system

Built-in water bath evaporation system, automatic water bath pot automatic water level detection, automatic water bath temperature control, automatic evaporation and automatic drainage;

Over-temperature automatic alarm system and water-dry automatic alarm system, multiple safety design, comprehensive protection of water temperature, water bath water, solvent, and exhaust gas to obtain safe treatment

Solvent recovery system

The solvent evaporates in a completely closed system, and the tail gas is automatically recovered without leakage.

Equipped with a solvent recovery system and a fully enclosed cavity design, which effectively prevents the leakage of solvents and protects the health of the operator.

Nitrogen protection

Carrier gas is provided in the system to support rapid evaporation test.

Test chamber negative pressure protection

Test chamber inlet and outlet are completely sealed.

Test chamber is evacuated at any time to ensure negative pressure.

Full automatic test

Water bath, drying, constant weight, evaporation integrated system design, built-in operating system, the system is equipped with ARM control system to control the host through the touch screen (inspection equipment and control software are combined into one).

Unattended automatic constant weight, reserved empty cup constant weight, effectively shorten test time and improve test efficiency.

Fully automatic test, the test process can be set flexibly, one-click operation, automatic feeding, automatic evaporation constant weight, automatic judgment, automatic shutdown.

Eighteen test stations are independently evaporated, and different samples can be tested simultaneously with independent data.

Software system

The software is designed according to the requirements of the computerized system of the new GMP appendix.

Require username and password to log in to the workstation.

Users are divided into various levels such as operator and administrator (such as administrator, operator, observer, etc. but not limited to these levels).

Administrators can adjust permissions at various levels; for example, increase and decrease system control items at a certain level.

With audit trail function (system audit trail, project operation audit trail, method audit trail), every data change is recorded; the safety and integrity of test data is guaranteed.

Real-time display of test weight, migration, temperature and other data for each cavity.

Test report page --- Show detailed test data. Reports can export files in Office, PDF, etc.

Multiple security considerations

Water heating is not electric heating; the heating system is located outside the test chamber, and there is no high-voltage electric fire in the evaporation chamber, and safety is guaranteed.

Over temperature alarm, evaporation completion alarm, etc. Multiple alarm settings, good safety performance.

MTEC-ZF900 Fully Automatic Overall Migration Tester

Function

Fully automatic overall migration tester is suitable for various utensils, containers, food packaging films, cans or other various food tools, pipes and so on with material of polyethylene, polystyrene, polypropylene, perchloroethylene resin to determination of the dissolution of products in different soaking solutions. Through the determination of evaporation residue, the analysis of leaching index is performed to meet the different needs of product applications.

Configuration

Evaporating dish, communication cable, gas pipe, steel pipe, 200g weight , Breaker , thermostat water bath .

Technical Specification

Items	Technical Parameters
Test range	0~80g (residue weight)
Test precision	±0.2mg
Resolution	0.1mg
Temperature range	Room temperature~120℃
Temperature precision	Room temperature~120℃
Heated air circulation speed	0.2 m/s
Test sample volume	0~200mL
Test sample number	1~9 pcs (each sample is independent)

Features

- Solvent evaporates in a fully closed system, manual intervention not requested.
- Built-in water bath evaporation system, automatically water bath refilling.
- The parameter curves are displayed in real time during the test.
- The heating system using the embedded electromagnetic device, temperature control program step calculation, and avoid over temperature.
- Save test records automatically, provide a convenient query function, easy to manage.
- Come with external computer software operating system, support Windows 10touch screen operation.
- Nine work stations, each with independent test data; can test nine samples at the same time.
- Professional test report helps improve test efficiency.
- Functional modularity, independent testing, calibration and other functions, strong data analysis ability, easy operation.

Standards

GB/T 5009.60-2003

GB/T 5009.64-2003

GB/T 5009.68-2003

GB/T 5009.69-2008

GB/T 5009.203-2003

GB/T 9740-2008

MTEC-GHH Universal material testing machine

Function

GHH door type electronic universal material testing machine is suitable for all kinds of metal and non-metal materials, such as metal foil, plastic film, composite film, aluminized film, aluminum foil, sheet, engineering plastic, rubber, leather, non-woven .Tensile, peeling, heat-sealing, tearing, puncture, compression, bending, shearing and other tests for samples such as fabrics, woven bags, and strapping tapes, as well as special tests for some products, can also achieve multiple closed loops such as constant stress and constant strain .The test can be completed with special devices such as torsion. Parameters such as tensile strength, yield strength, elongation at break, constant elongation stress, constant stress elongation, and elastic modulus can be automatically calculated according to GB, JIS, ASTM, DIN and other standards.

Technical Specification

Items	Technical Parameters
Test Range	0-5000N (multiple sensors optional)
Test accuracy	Within ± 0.5% of the indicated value (0.5 level)
Test speed	0 ~ 500mm / min, stepless speed change
Speed resolution	within ±0.5% of the displayed value
Valid test width	30mm
Elongation	1100%
Valid experiment distance	600mm
Specimen dimension	Φ100mm, permeability area 50.24cm

Features

- Has flexible and diverse interfaces and control methods, which can be used for multiple tests such as stretching, peeling, heat sealing, tearing, puncture, compression, bending, shearing, etc., and setting of multiple parameters such as speed, thickness and clamping distance.
- High measurement accuracy, it can reach level 0.5.
- The whole process is controlled by the computer, and the test is displayed online after the test. It can perform non-automatic data storage, data analysis and comparison functions, curve overlay recording function, on-line printing function, arbitrary zoom function.
- The fully digital control system cooperates with imported AC servo system and motor to control the zero displacement.
- High-precision ball screw loading, stable loading, long testing machine life, long-term stability and energy saving.
- Load / deformation measurement: With multiple sub-channels, it supports extended measurement of multiple sensors.
- Wide speed range, suitable for high and low speed tests.
- Open data structure, whether it is result parameters or process data, allows users to call randomly, which is very convenient for users. Self-editing report function, the data can be easily imported into an Excel table for easy post-processing.
- Control and measurement unit can choose built-in type (simple appearance, save space) and external type (easy to upgrade, maintain and operate separately from the computer).
- It has complete safety protection functions such as limit protection, overload protection, emergency stop, etc., and the test operation is safe and reliable.
- High sampling rate (100 times / second), the test data is more accurate.
- The core uses high-quality components, which is more accurate and durable.
- Double-column table structure, beautiful and elegant, good rigidity.
- Pneumatic fixture is optional, suitable for a variety of fixtures

Standards

YBB00102003、YBB00132002、YBB00202004、ASTM D828、ASTM E4、ASTM D882、ASTM D1938、ASTM D3330、ASTM F88、ASTM F904、ISO37、JIS P8113、GB/T8946、GB 8808、GB 13022、GB/T1040、GB4850、GB/T7753、GB/T7754、GB/T453、GB/T17200、GB/T16578.1、QB/T1130、GB/T 2791、GB/T 2790、GB/T 2792、GB/T 7122、GBT 10004、GB/T 17590、JJG 139、GB/T 6344、GB 10808、YBB00112003、QB/T 2358

Configuration

Universal material testing machine, stretching fixture, professional software, communication cable, power cable

Technical Specification

Items	Technical Parameters
Force measurement range	0-300N,(1400% elongation rate)
Force measurement precision	within ±1% of the indicating value
Test speed	0-300mm/min (infinitely variable speeds)
Displacement precision	Within ±1% of the indicating value
Effective test width	≤30mm
Effective test travel	700mm
Dimension	600(L)mm×500(W)mm×1300(H)mm
Power	300W
Weight	65kg

M-TEC-LC-1 Sample cutter

Function

This instrument cuts samples of plastic film, paper and so on in preparation for other tests, such as tensile, peeling, tearing and heat sealing etc. It is compactly structured and easy to use. The edges of sample cut out are even and smooth.

Technical Specification

Items	Technical Parameters
Cut sample size	15mm x 210mm (width adjustable)
Cut sample quantity	10 PCS (single layer)
Sample thickness	≤300um
Cutter size	360(L)mm x 280(B)mm x 250(H)mm

MTEC-GBH-1 Electronic Tensile Tester

Function

It is for testing the tensile, peeling, heat sealing, tear, piercing, compression, bending, and cutting strength of plastic film, composite film, tape, soft packaging material, rubber sheets, paper, non-woven fabrics and other packaging materials, widely used in industries of plastic films, packaging, pharmaceuticals, food, inspection agency, research institute, college and so on.

Features

· Versatile functions, interface and operation modes; multiple parameters setting.

· The whole process is controlled by computer, online display after finishing test. Data storage automatically, analysis and comparison of data function, curve superimposed recording function, print with connection of computer, arbitrary scaling function.

· 3 level security protection, the trial running is more secure.

· High-speed sampling (100times/s), accurate experiments data.

· Core part adopt import components, more accurate and durable.

· Desktop column structure is beautiful and delicate, easy and natural.

· Various clips optional for different test purposes.

Technical Specification

Items	Technical Parameters
Force measurement range	0~500N, 1400% elongation
Force measurement resolution	within ±0.5% of the indicating value (0.5 grade)
Test speed	0-500mm/min (stepless speed regulation)
Displacement accuracy	Within ±0.5% of the indicating value
Effective test width	≤30mm
Effective test travel	750mm
Dimension	600mm×600mm×1300mm
Power	1000W
Weight	70kg

Standards

ASTM D828, ASTM E4, ASTM D882, ASTM D1938, ASTM D3330, ASTM F88, ASTM F904, ISO 37, YBB 00112003, YBB 00102003, YBB 00132002, YBB 00202004, GB/T 8946, GB/T 1040, GB 4850, GB/T 7753, GB/T 7754, GB/T 453, GB/T 17200, GB/T 16578.1, QB/T 1130, GB/T 2791, GB/T 2790 GB/T 2792, GB/T 7122, GB/T 10004, GB/T 17590 GB/T 6344, GB 10808, GB 8808, GB 13022, JJG 139, JIS P8113, QB/T 2358

MTEC-GBL-L Electronic Tensile Tester

Function

It is suitable for tensile, peeling ,heat sealing and tearing testing of all kinds of plastic film, paper-plastic composite film, tape, soft packaging materials, rubber sheet, paper, non-woven fabrics.etc. It has been widely used in product quality control in plastic film, food, pharmaceutical industries and research in testing institutions.

Features

- Multi-parameter variables setting in width, speed, thickness and clip distance.
- LCD display; Thermal printer print the test results.
- 3 level security protection, the trial running is more secure.
- High-speed sampling (50times/s), accurate experiments data.
- Core part adopt import components, more accurate and durable.

Technical Specification

Items	Technical Parameters
Force range	0-300N (0~500N optional), 1400% elongation
Force accuracy	within ±1% of the displayed value (grade 1)
Test speed	0-500mm/min (infinitely variable speeds)
Displacementaccuracy	within ±1% of the displayed value
Test width range	30mm (50mm can be customized)
Travel distance range	700mm
Instrument size	600mm × 500mm ×1300mm
Weight	65kg

Standards

ASTM D828, ASTM E4, ASTM D882, ASTM D1938 , ASTM D3330, ASTM F88, ASTM F904, ISO 37, YBB00132002, YBB00202004, YBB00112003, YBB00102003, GB 8808, GB 13022, GB/T1040, GB4850, GB/T7753, GB/T7754, GB/T453, GB/T17200, GB/T16578.1, QB/T1130, GB/T 2791, GB/T 2790, GB/T 2792, GB/T 7122, GBT 10004, GB/T 17590, GB 10808, JJG 139, GB/T 6344, JIS P8113, QB/T 2358

MTEC-GBS Electronic Tensile Tester

Function

To test the tensile strength, peeling strength, and heat sealing strength of plastic film, composite film, tape, soft packaging material, rubber sheets, paper, non-woven fabrics and other packaging materials, widely used in industries of membrane, packaging, pharmaceuticals, food industries, inspection agency, research institute, college and so on.

Features

- It's available to test tensile strength, peeling strength, heat sealing strength and tearing strength.
- User can set various parameters like width, speed, thickness and distance.
- Results are shown on LCD screen.
- Can print out testing results with built-in thermal printer.
- Core parts are imported, with high precision and durability.
- High sampling speed (50 times/s) and accurate data.
- 3 levels of security protection make the experiment safer.
- Table standing design for sitting operation, easy and comfortable.

Standards

GB8808, GB13022, GB/T1040, GB4850, GB/T7753, GB/7754, GB/T453, GB/T17200, GB/T16578.1, QB/T1130, GB/T 2791, GB/T 2790, GB/T 2792, GB/T 7122, GB/T 10004, GB/T 17590, JJG 139, GB/T 6344, GB 10808, YBB00112003, YBB00102003, YBB00132002, YBB00202004, ASTM D828, ASTM E4, ASTM D882, ASTM D1938, ASTM D3330, ASTM F88, ASTM F904, ISO37, JIS P8113, QB/T 2358

Technical Specification

Items	Technical Parameters
Force range	0-300N,1400% elongation rate
Force accuracy	within ±1% of the displayed value (grade 1)
Test speed	100mm/min 200mm/min 250mm/min300mm/min(Optional: 0~300mm/min infinitely variable speeds)
Displacement accuracy	within ±1% of the displayed value
Test width range	30mm (50mm can be customized)
Travel distance range	700mm
Instrument size	600mm × 500mm ×1300mm
Power	65kg
Power supply	AC 220V, 50Hz
Weight	300W

Configuration

Power cable, tensile clip, buckboard, allen wrench, right-angle tear blade, wooden box, cross screwdriver

Users owned

User provide: Power supply, 500w, 220V, 10A, three holes socketground wire
Optional (for purchase): Metrology Certificates

MTEC-GBL-H Electronic Tensile Tester

Function

To test the tensile strength, peeling strength, heat sealing strength and tearing strength of plastic film, composite film, tape, soft packaging material, rubber sheets, paper, non-woven fabrics and other packaging materials, widely used in industries of membrane, packaging, pharmaceuticals, food industries, inspection agency, research institute, college and so on.

Features

- It's available to test tensile strength, peeling strength, heat sealing strength, puncturing strength and tearing strength.
- User can set various parameters like width, speed,thickness and distance.
- Results are shown on LCD screen.
- Can print out testing results with built-in thermal printer.
- Core parts are imported, with high precision and durability.
- High sampling speed (50 times/s) and accurate data.
- 3 levels of security protection make the experiment safer.
- Table standing design for sitting operation, easy and comfortable.

Standards

ASTM D828, ASTM E4, ASTM D882, ASTM D1938, ASTM D3330, ASTM F88, ASTM F904, JIS P8113GB8808, GB13022, GB/T1040, GB4850, GB/T7753, GB/7754, GB/T453, GB/T17200, GB/T16578.1, QB/T1130, GB/T 2791, GB/T 2790, GB/T 2792, GB/T 7122, GB/T 10004, GB/T 17590, JJG 139, GB/T 6344, GB 10808, YBB00112003, YBB00102003, YBB00132002, YBB00202004, QB/T 2358

Technical Specification

Item	Technical Parameters
Force range	0-300N (0~500N optional), 1400% elongation
Force accuracy	within ±1% of the displayed value (grade 1)
Test speed	0-500mm/min (infinitely variable speeds)
Displacement accuracy	within ±1% of the displayed value
Test width range	30mm (50mm can be customized)
Travel distance range	700mm
Travel distance range	600mm×500mm×1300mm
Power	300W
Power supply	AC 220V，50Hz
Weight	65kg

Configuration

Power cable, data cable, tensile clip, software flash disk, buckboard, allen wrench, right-angle tear blade, wooden box, cross screwdriver

Users owned

User provide: Power supply, 500w, 220V, 10A, three holes socketground wire, 1 set of computer（with nine-pin COM port，Windows7

Optional (for purchase): Computer(win7 32bit) Pneumatic clip, Metrology Certificates

MTEC-GBB-F1 Heat Seal Tester

Function

GBB-F1 Heat Seal Tester is to test the temperature, pressure, and time for heat sealing of various film materials. It is applied to quality inspection organizations, drug control institutions, research institutes, packaging, thin film, food companies, pharmaceutical enterprises, personal care industry and so on.

Features

- Five points heat seal, can set six different temperature at the same time(low bar and five upper bars).
- Upper and lower heat seal bars have independent temperature control and setting.
- The equipment adopts digital P.I.D. temperature to control, the temperature is more accurate. Temperature sensor is easy to calibrate.
- Using compressed air, pneumatic drive. Pressure test, convenient to set pressure according to sample from customer.
- Automatic and manual modes; use foot switch for manual mode.
- Can upgrade heat seal bar with anti-sticking function. Can customize size, shape and smoothness of heat seal bar.
- Touch screen shows the current temperature, heat sealing temperature, heat sealing pressure and heat sealing time of the upper and lower bar.

Standards

ASTM F2029

YBB 00122003

QB/T 2358

Technical Specification

Items	Technical Parameters
Temperature range	Room temperature~300℃
Temperature precision	± 0.2℃
Seal time range	0.1s~99.99h
Pressure range	0.05~0.8MPa
Heat seal area	Upper bar 35×10 mm×5 sections; lower bar has silicone pad as buffer;(Can customize all kinds of specifications)
Heat seal method	two ways: automatic or manual, external air cylinder
Instrument size	700(L)×400(B)×540(H)mm

MTEC-GBB-F Heat Seal Tester

Function

Heat Sealer tests the temperature, pressure and time for heat sealing of plastic film, composite film,aluminum foil and so on,used in packaging, plastic film, food, pharmaceuticals, personal care industries,inspection agency, research institute, college and so on.

Features

It can set with 5 different temperature spots to heat seal, select the optimal heat seal temperature, can also set the same temperature to speed up the heat sealing.

Configuration

Main frame, a foot switch, a powercord .
Note: user-owned gas source.

Standards

ASTM F2029

YBB 00122003

QB/T 2358

Technical Specification

Items	Technical Parameters
Temperature range	Room temperature 250℃
Control accuracy	±1℃
Seal time range	0.01s~99.99h
Pressure range	0.05~0.8MPa
Heat seal area	upper bar and lower bar: 300×5.5mm, smooth surface, lower bar covered with heat-resistant silicone pad
Heat seal method	upper bar and lower bar double heating
Gas source	compressed air
Weight	55 kg
Instrument size	700mm × 400mm × 540mm

MTEC-GBB-A Heat Seal Tester

Function

GBB-A Heat Seal Tester can accurately test the heat seal temperature range, heat seal strength, suitable heat seal speed and heat seal pressure of plastic film base material, flexible packaging composite film, coated paper, aluminum foil and others. It is applied to the quality control of various plastic film, food and drug manufacturer, the scientific research and teaching experiment of testing institutions and schools.

Features

· Dual temperature, dual control, dual display, high-precision imported brand element configuration, export-oriented setting.
· Excellent performance, external cylinder, with a variety of switching functions.
· Can upgrade heat seal bar with anti-sticking function.

Standards

ASTM F2029

YBB 00122003

QB/T 2358

Configuration

Main machine body, power cable, foot switch.
User provide: compressed air.

Technical Specification

Items	Technical Parameters
Temperature range	Room temperature~300℃
Temperature precision	± 1℃
Seal time range	0.1s~999.9s
Pressure range	0.05~0.8Mpa
Heat seal area	Upper and lower bar :300mm × 5.5mm, smooth surface; (lower bar has silicone pad as buffer)
Heat seal method	two ways: automatic or manual, external air cylinder
Instrument size	700mm × 400mm × 540mm

MTEC-GM-4 Coefficient of Friction Tester

Function

This instrument can test the coefficient of friction of plastic film, thin sheet, paper and so on. It is applied to quality inspection organizations, drug control institutions, research institutes, packaging,thin film, foodcompanies, pharmaceutical enterprises, personal care industry and so on.

Features

- Stable performance、test result accurate,simplicity of operation, matching control software,can print the slide motion curve and the experiment report.
- Professional appearance design, the core components are the imported parts with higher precision,longer life,performance is more perfect,stepless speed regulation.

Technical Specification

Items	Technical Specification
Coefficient measurement range	0.01~0.999
Resolution	±2%
Force range	0 ~ 10N
Slide speed	Common speed 150mm/min (can infinitely variable speeds)
Sample thickness	≤2mm
Slide size	63×63mm
Slide weight	200±2g
Work Surface size	200mm×470mm
Display status	LCD
Power	100W

Standards

GB/T10006-1988

ASTMD 1894-2014

ISO 8295-2004

TAPPI 816

MTEC-GM-1 Coefficient of Friction Tester

Function

This instrument can test the coefficient of friction of plastic film, thin sheet, paper and so on. It is applied to quality inspection organizations, drug control institutions, research institutes, packaging,thin film, foodcompanies, pharmaceutical enterprises, personal care industry and so on.

Features

- Stable performance，test result accurate,simplicity of operation，matching control software，can connect the microcomputer to print the slide motion curve and the experiment report.
- Professional appearance design，the core components are the imported parts with higher precision，longer life、performance is more perfect,stepless speed regulation.

Technical Specification

Items	Technical Parameters
COF test range	0.01~0.999
Test accuracy	±0.01
Force range	0~10N
Sliding speed	150mm/min
Sample thickness	≤2mm
Slide size	200×470mm
Slide weight	200
Work Surface size	470mm×340mm×220mm
Display status	LCD
Power	100W

Configuration

Main Frame,a set of software,a slider,a power line,a data line .

Standards

ASTM D 1894 -01

ISO 8295

GB 10006

MTEC-GM-6 Coefficient of Friction Tester

Function

This instrument can test the coefficient of friction of plastic film, thin sheet, paper and so on. It is applied to quality inspection organizations, drug control institutions, research institutes, packaging, thin film, food companies, pharmaceutical enterprises, personal care industry and so on.

Features

Accurate and reliable data

- high precision with Imported core components with .
- It is easy and convenient to calibrate the force value sensor with the special standard block.

Simple operation

- With LCD display, the static friction coefficient and dynamic friction coeffi cient are displayed in real time.
- Can run independently without computer, data processing automatically.
- Easy operation, with controlling software, can connect to computer to display curves and print out the test report.

Advanced technology

- Full-auto operation, auto judgment and stop.

Reliable and easy-maintenance

- Sensor over-range auto protection.
- Function modularization,easy to maintain.

Standards

GB/T 10006-1988

ASTM D1894 -2014

ISO 8295-2004

TAPPI 816

Technical Specification

Items	Technical Parameters
COF test range	0.01~0.999
Test error	±2%
Force range	0~10N
Sliding speed	Common speed 100mm/min（can infinitely variable speeds）
LCD display	Test speed, coefficient of dynamic friction and coefficient of static friction
Slider size	63×63mm
Slider weight	200±2g
Temperature control	Room temperature~75℃（optional）
Work platform size	200×470mm
Sample thickness	≤2mm
Instrument size	470×330×210mm
Weight	37kg

Configuration

Spare parts
Power cable，Allen wrench，
Cross screwdriver，
Wooden box，Slider,Weight
User provide
Power supply :500w,220V ,10A ,
three-holes socket

MTEC-GM-FB Coefficient of Friction Tester

Function

This instrument can test the coefficient of friction and peeling strength of plastic film, thin sheet, paper and so on. The coefficient of friction can be accurately determined by the smoothness, opening difficulty degree and uniformity of the film so as to guide the production correctly.

Standards

GB/T 10006-1988
ASTM D1894-2014
ISO 8295-2004
TAPPI 1816

Features

- Conforms to Chinese national standard, American standard and international standards.
- Stable performance and accurate test result; controlled by microcomputer, LCD screen displays curves and test result.
- Can test peeling force and coefficient of friction.
- Easy switch between test items; microcomputer print the test result directly.
- Easy operation; can connect to microcomputer to print out the moving curve of slider and test report.
- Professional appearance design; core parts are imported, so machine life is longer and function is more perfect.
- Infinitely variable speeds.
- Professional software supports test result curve superposition statistical analysis, storage and printing functions. Standard RS232 interface connects computers and instruments for data transmission (optional).

Technical Specification

Items	Technical Parameters
COF test range	0.01~0.999
Precision	0.1
Force range	0~10N
Sliding speed	0~500 mm/min infinitely variable speeds (common speed: 100±10mm/min; 150±10mm/min)
Slider size	63mm ×63mm x 5mm
Slider weight	200±2g
Sliding platform size	200×470mm
Sample thickness	≤2mm
Weight	13.6kg
Instrument size	470 mm ×340mm ×220mm
Power	100W
Power supply	AC 220V±10V

Configuration

Main machine body, power cord, special tools, sliders, weights

MTEC-GC-9802 Gas Chromatography

Function

GC-9802 gas chromatography comes with reasonable structure, stable and reliable performance, simple operation and easy maintenance. It can be widely used in the production and scientific research departments such as； petroleum, chemical industry, pesticide, medicine and hygiene, commodity inspection, environment protection, college and so on. It is to detect organic solvents, the solvent residue of printed packaging materials and the purity or content of a single solvent.

Standards

YBB 00132002

GB/T 10004-2008

QBT 2929

Technical Specification

Items	Technical Parameters
Detector	hydrogen flame detector（FID）（optional for others）
Detector Parameters	Sensitivity Mt≤1×10^{-11}g/s（n−hexadecane）; baseline drift≤0.02mv/h; noise≤0.02mv
Chromatographic column	OV-1701 capillary-column chromatography, 50m×0.32mm×0.5um, maximum service temperature:400℃(optional for other chromatographic column)
Injection port	Capillary column injection port（optional for packed column injection port）
Column oven size	240×210×240mm
Temperature range	Highest 400℃
Temperature controlling accuracy	0.1%
Temperature resolution	0.1℃
Heating rate	0~40℃/minute
Carrier gas source	N_2，purity 99.99%，0.4MPa，dry
Hydrogen gas source	Purity 99.99%，0.4MPa，dry
Air source	0.4MPa，dry，clean，oil-free
Air connection	Φ3mm gas pipe
Instrument size	500×550×500 mm

Features

· Economical and practical, excellent performance and quality.
· Adjustable gas circuit pressure, stable flow, with multiple gas circuit system of nitrogen, hydrogen, air, exhaust, shunt , cleaning.
· LCD screen displays temperature in real time.
· Cellular overall structure design, convenient to install and maintenance.
· Advanced noise resistant system, work quietly.
· Over-temperature protection function, with program protection and circuit protection double insurance.
· With data workstation, professional software support and powerful data analysis function.
· Display working condition and chromatogram curves; curves can be zoomed and moved.
· Professional test report, can export PDF file.
· Manual button switch, its function is equal to “start collecting” , which is convenient for sampling.
· Easy to operate detector and baseline calibration.

MTEC-GC-9803 Gas Chromatography

Function

GC-9803 gas chromatography comes with reasonable structure, stable and reliable performance, simple operation and easy maintenance. It can be widely used in environmental protection, trace detection of air, water and other pollution; Analysis, monitoring and research of toxic substances; Biochemistry; Clinical application; Pathological and viral research; Food fermentation; Petrochemical industry; Petroleum processing; Oil analysis; Geology and prospecting research; Organic chemistry; Synthesis research; Health quarantine; Detection, analysis and research of public hazard and other production and scientific research departments. It is to detect organic solvents, the solvent residue of printed packaging materials and the purity or content of a single solvent.

Features

- Full color super 7 inch LCD touch screen, electronic display flow value and pressure value of gas circuits, focused on improving the user's experience.
- The computer counter - control and the main computer touch - control realize bilateral control synchronously.
- Multicore and 32-bit embedded hardware system ensures the reliable operation of the instrument.
- One button to start the machine.
- Extensible external trigger function for synchronization operation, can start the host and workstation at the same time by external signals (automatic sampler, thermal analyzer, etc;).
- 8pieces of extended functional interfaces, can be equipped with various air leakage and air shortage self-check function control valves, and work according to the set time sequence.
- With 20 groups of memory functions for sample test method.
- RS232 communication interfaceand LAM internet access.
- Various types of inlet changeover valves (manual, pneumatic or electric) can be equipped for various types of gas analysis.
- High precise temperature control system, high control precision(better than±0.05℃), column box with nine-gradients temperature program.
- Manual regulation for gas circuit flow/pressure, the screen shows the flow/pressure value.
- With gas leakage and gas shortage alarm functions in gas circuit.
- Perfect system self-check function and automatic fault identification function.

Technical Specification

Items	Technical Parameters
Flame ionization detector(FID)	LOD: ≦3x10-12g/s (n-hexadecane); baseline noise:≦5x10-14 A; baseline drift:≦6x10-13 A; dynamic range: 107
Thermal conductivity detector(TCD)	Sensitivity: 8000mV.ml/mg (n-hexadecane); baseline noise:≦ 0.05 mV; baseline drift:≦0.15 mV /30min; dynamic range: 105
Column oven	Internal volume: 22L; temperature range: room temperature plus 5℃ - 400℃; temperature accuracy :≦0.1 ℃; heating rate: 0.1 - 60℃ /min; gradients of temperature program: 9; repeatability of temperature program: ≦ 2%; cooling method: opening back door
Sample injector	Temperature range: room temperature plus 7℃ - 420℃; Carrier gas flow control mode: constant pressure; Number of simultaneous installations: 3 pieces at most; Type of injection unit: packed column and split flow; Column head pressure range: 0-400kPa; Column head pressure control accuracy: 0.1kpa; Flow setting range: H2 0-200ml/min, N2 0-150ml/min.
Temperature control accuracy	Better than ±0.1℃ (measure when 200℃)
Temperature control range	Room temperature plus15℃～399℃ (increment1℃)
Instrument size	568mm×560mm×490mm
Weight	40Kg
Power supply	AC220V±22V, 50Hz±1Hz

Standards

QBT 2929

GB/T 10004-2008

YBB 00132002

Configuration

Main configuration: Instrument case, capillary column sampler, full set of capillary column carrier gas and auxiliary gas circuits, microcomputer temperature controller, flame ionization detector and micro-current amplifier, universal purifier, cylinder pressure reducing valve and connection pipelines of external gas circuits.

MTEC-NHA-300 Gas generator (N2,H2,AIR)

Function

NHA-300 Gas generator is a gas generator perfect combination of Nitrogen, Hydrogen and Air. It has small volume, easy operation, and multistage protection device inside, it is applicable to supply stable and high-quality hydrogen, air and nitrogen for gas chromatography.

Features

· It can replace high-pressure cylinders, and make the lab instrumented;
· Its operation is easy, output pressure is stable, and equipped with flow display;
· It doesn't consume electrolyte solutes, just add distilled water;
· Its performances is reliable and safety, equipped with multistage protection device;
· It can be used continuously and for long time.

Technical Specification

Items	Technical Parameters
Nitrogen purity	>99.999%
Hydrogen purity	>99.999%
Air quality	dry, no oil, three grade purification of clean gas.
Outflow	N_2、H_2: 0-300ml/min; Air:0-2000ml/min
Out pressure	H_2:0-0.4MPa(set 0.3MPa) N_2:0-0.5MPa(set 0.4mpa) Air: 0-0.4MPa
Working power	220V±10%; 50HZ±5%
Max. power	400W
Environment requirement	temperature 10-40℃, humidity ≤85%, no dense dust, no corrosive gas
Dimension	460mm x 360mm x370mm
Weight	40Kg

MTEC-DHG-9030A Drying Oven

Function

It is used to dry, bake, melt and sterilize test sample, widely used in industrial and mining enterprises, laboratory, research institute, inspection agency, college and so on.

Features

- The inside wall is made of mirror stainless steel or steel drawing board, and main body made of high quality steel.
- Temperature control and protection, digital display and timing, accurate and stable.

Technical Specification

Items	Technical Parameters
Temperature range	room temperature+10℃~+200℃
Temperature fluctuation rate	1℃
Temperature resolution	0.1℃
Sensor component	Pt100
Display	LED digit display
Outer shell	anti-rust cold-reduced sheet with spray-paint
Inner tank	SUS304 wire drawing stainless steel
Heat insulation	super glass wool
Heater	nickel-chrome heating wire
Blower	centrifugal blower
Protection system	over temperature protection, blower overheating protection
Shelf capacity	30L
Power	1000W
Power supply	AC 220V 50Hz
Inner size	340mm x 320mm x 320mm
Outer size	640mm x 440mm x 490mm
Weight	34kg

MTEC-ZM-100 Inverted Pressure Sterilized Boiler

Function

Inverted Pressure Sterilized Boiler is used for sterilization and high-temperature test of packaging materials (including adhesives and printing ink) in the industries of packaging, plastic films, food, medical units, inspection agency, research institute etc.

Features

- Automatic rising temperature, automatic keeping temperature, automatic timing;
- Inverted pressure sterilized function;
- Use spray of water cooling and air cooling two ways, high efficiency cooling, completely sterilization, faster heating and cooling;
- Five grades of safe measures, efficient and reliable.

Technical Specification

Items	Technical Parameters
The diameter of sterilizing barrel	Φ400mm, H500mm; Φ500mm, H560mm
The capacity of storage barrel	50L
Range of working pressure	0~0.22Mpa (saturated vapor pressure)
Water compensation pressure	≥0.32 Mpa
Sterilization temperature	100~135℃
Inverted pressure	0.14 ~ 0.165 Mpa
Power	4.5kw±10%
Configuration	One main frame, one spray, spanner, water inlet, faucet
Optional	Compressed air, High pressure plastic air pipe (Need to match pressure reducing valve, if not compressed air can choose air compressor)

Standards

GB 150

GB/T 10004

GB 4793

YY1007-2005

MTEC-GQ-160A Modified Atmosphere Refrigerator

Function

GQ-160A Modified Atmosphere Refrigerator, with microelectronics technology, is for making preservation experiment on fruits, vegetables, flowers and plants in modified atmosphere conditions, and keeps them fresh by controlling concentration of O_2, N_2, CO_2, and C_2H_4 and the temperature and humidity in the boxes. It is widely used in industries of microorganisms, environmental, food, research institute and so on.

Features

- Scroll compressor refrigeration system.
- PID algorithm with the solid state relays control the heating tube and no rigid mechanical contacts, long service life, average temperature of heating, the temperature is constant.
- Mass flow controller, the resolution of 1ml/min.
- High frequency atomization humidifier for humidification, large humidification range, long time humidification without getting fever.

Technical Specification

Items	Technical Parameters
Test range	O_2 :0%~50%; CO_2 :0%~20%;C_2H_4:0~200ppm N_2:0%~100%
Resolution ratio	O_2: 0.01%; CO_2: 0.01%, C_2H_4:0.1ppm
Gas flow control	O_2: 0~100ml/min, CO_2: 0~100ml/min; N_2: 0~100ml/min
Temperature control range	-5℃~50℃
Temperature deviation	±2℃
Temperature accuracy	±0.1%
Humidity range	normal ~ 95%RH
Humidity deviation	±3%RH
Humidification power	2000W
Lighting power	10W
Capacity	160L
Material	color steel
Power supply	AC 220V, 50Hz
Weight	270kg
Environment temperature	0 ~ 40℃
Refrigeration Power	2000W
Size	inner: 48cm × 38cm x 73cm; outer: 61cm × 62.5cm x 160cm
Gas purity	≥99.9%

Testing Principle

In a closed system, with a variety of adjusting methods to obtain gas component constituents different from that of normal atmospheric gas, microbial life activities resulting in product deterioration are inhibited. The key of atmosphere preservation technology is to adjust the gas concentration. In addition to the concentration and component constituents of the gas, two core controlling conditions: temperature and relative humidity should also be considered. Not only pay attention to their individual impact, but also emphasize on the combined effects of the various conditions of the environment overall. The Modified Atmosphere Refrigerator can simulate above conditions to find out the optimal preservation conditions of different products correspondingly.

MTEC-GQ-300 Modified Atmosphere Refrigerator

Features

· Scroll compressor refrigeration system.

· PID algorithm with the solid state relays control the heating tube and no rigid mechanical contacts, long service life, average temperature of heating, the temperature is constant.

· Mass flow controller, the resolution of 0.01ml/min.

· High frequency atomization humidifier for humidification, large humidification range, long time humidification without getting fever.

Function

GQ-300 Modified Atmosphere Refrigerator, with microelectronics technology, is for making preservation experiment on fruits, vegetables, flowers and plants in modified atmosphere conditions, and keeps them fresh by controlling concentration of O_2, N_2, CO_2, and C_2H_4 and the temperature and humidity in the boxes. It is widely used in industries of microorganisms, environmental, food, research institute and so on.

Configuration

Main machine body, built-in ARM arithmetic system, humidification module, temperature controlling system, ethylene removal device.

Optional:
Option 1: Distant controlling system (automatically records parameters and curves; with image capturing and recording function) and a computer.
Option 2: Gas inlet/outlet port (inlet port: can input external gas; output port: can connect to gas chromatography analyzer)

User provide: gases, gas supply cylinder, pressure releasing valve.

Technical Specification

Items	Technical Parameters
Test range	O_2: 0%~100%; CO_2: 0%~20%; C_2H_4:0~200ppm (optional); the rest is N_2
Resolution ratio	O_2: 0.01%; CO_2: 0.01%; C_2H_4: 0.01ppm(optional)
Gas flow control	O_2: 0~3000ml/min, CO_2: 0~1000ml/min; N_2: 0~3000ml/min
Temperature control range	-5℃~50℃
Temperature deviation	±1℃
Temperature accuracy	±0.1%
Humidity range	normal~ 98%RH
Humidity deviation	±3%RH

Items	Technical Parameters
Humidification power	2000W
Lighting power	10W
Capacity	120L, 120L, 120L
Material	color steel
Power supply	AC 220V, 50Hz
Weight	70kg
Environment temperature	0 ~ 40℃
Refrigeration Power	2000W
Size	1100mm x 1150mm x 1960mm
Gas purity	≥99.9%

Product Advantages

Hardware and software

· The product consists of controlling section, implementing section and workroom. The control section can set a variety of parameters (including temperature, humidity, gas concentration, etc.), to meet the growth requirement of different animals and plants and the preservation needs of various living things.

· Three test chambers. Each chamber independent controlling system, illumination system and sterilization system (With ultraviolet disinfection and ozone sterilization function).

· Imported precise sensors ensure wide test range and high accuracy.

· Configured with: transparent window, sterilization system, built-in headlight and self-occlusive design cabinet.

Temperature

· Adopts quartz tube to heat up and scroll compressor to cooling down, so the temperature can be risen and lowered quickly, with high performance and little noise.

· PID algorithm works together with solid relay to control the heating tube, controls the temperature precisely, evenly and constantly, without rigid mechanical contacts and with long lifetime.

· Automatically adds water.

Humidity control

· High frequency atomization humidification provides large humidification range and stable humidity. Can humidify for a long time without getting hot.

· The humidifying system of each chamber works independently. Automatically humidifies after setting the humidity parameters, reach the set humidity and stay at that humidity constantly.

Gas control

· Automatically control the concentration, temperature and humidity of the gases.

· Accurate flow controller (resolution ratio: 0.01ml/min) controls the gas flow exactly.

· With ethylene eliminating device and gas substituting pump, controls the concentration of ethylene effectively

MTEC-GBR Hot Tack Tester

Function

GBR Hot Tack Tester can be used to measure the hot tack seal strength of various packaging films at different temperatures and different hot tack time. The impact test was carried out on the hot tack parts directly by imitating the using state of packaging bags. The unit is "N" and various parameters can be set arbitrarily. P.I.D control system is adopted for high control accuracy. LCD display, data can be seen directly, convenient to use.

Features

- The temperature, pressure and time are adjustable, and the temperature control of the upper and lower sealing knives are independent and set separately.
- Compressed air, pneumatic drive, and a single-cylinder synchronous circuit design.
- The sealing knife can be upgraded with anti-stick function.
- Temperature sensor calibration is easy.
- The device uses digital P.I.D. temperature control to control temperature more accurately.
- Pressure detection with touch screen display to display test data.
- Built-in printer to print test reports
- Connectable to computer

Configuration

Hot tack tester, power cable, air pipe, communication cable

Standards

ASTM F1921
ASTM F2029
QB/T 2358
YBB00122003

Technical Specification

Items	Technical Parameters
Temperature range	Room temperature~250℃
Temperature accuracy	±1℃
Heat sealing pressure	0.1-0.8MPa
Heat Seal Dwell Time	0.01s-99s

Items	Technical Parameters
Power supply	AC 220V，50Hz
Instrument size	310mm x 460mm x 680mm
Sample length	200mm
Force range	0~300N

MTEC-GBK-1 Heating Shrink Tester

Function

It is used to determination of the degree of unrestrained linear thermal shrinkage and dimensional stability at different temperatures. Widely used in industries of plastic material, plastic products, petroleum, chemicals, research institute, inspection agency and so on.

Technical Specification

Items	Technical Parameters
Specimen size	≤140mm×140mm
Temperature range	room temperature ~ 250℃
Temperature accuracy	±0.1℃
Power Supply	AC 220V 50Hz
Dimensions	320mm × 400mm × 260mm

Standards

ASTM D2732

GB/T 13519-1992

Configuration

Main machine body, power cable, upper cover
Optional: clipping mesh 5 pieces, clipping mesh brace 3 pieces

MTEC-GBG-L Pendulum Impact Tester

Function

GBG-L Pendulum Impact Tester is professionally applicable to the determination of impact resistance properties of pendulum of plastic films, sheets, composite films, aluminum foils and other materials.

Features

- Accurate test result; LCD display; automatic data processing; can print report.
- Can change impact head and clips.
- Easy to use; designed for flexible packaging industry.

Standards

ASTM D3420

GB/T 8809

Technical Specification

Items	Technical Parameters
Maximum impact energy	3J
Resolution ratio	0.001J
Pendulum angle	90°
Pendulum swing radius	280mm
Size of plunger chip	Φ12.7mm, Φ19mm, Φ25.4mm
Size of sample tongs	Φ60mm, Φ90mm
Sample size	100mm×100mm
Instrument size	480mm × 330mm × 540mm
Weight	48 kg

Configuration

Main machine body, clips, power cable

User provide: compressed air

Users owned

Compressed air

MTEC-GBD-B Pendulum Impact Tester

Function

GBG-L Pendulum Impact Tester is professionally applicable to the determination of impact resistance properties of pendulum of plastic films, sheets, composite films, aluminum foils and other materials

Technical Specification

Items	Technical Parameters
Maximum impact energy	3J
Dial minimum scale value	0.02J
Pendulum angle	90°
Pendulum swing radius	280mm
Impact speed	2.5m / s
Size of impact head	Φ12.7mm (other sizes available)
Size of clips	Φ60mm, Φ90mm
Sample size	100mm×100mm

Configuration

Main frame, a fixture

Standards

ASTM D3420

GB/T 8809-2015

MTEC-GBD-L
Falling Dart Impact Tester

Function

Applicable to the determination of the impact resistance of the plastic film, sheet and other materials of packaging industry, film manufacturers, packaging materials testing organizations

Features

· The test results are accurate, easy to operate, LCD, automatic data processing and can be printed.
· Optional a and b are two modes to experiment.

Configuration

Main frame,printer, pneumatic clamps, a set of supporting weight, power cord, a falling ball device (optional)
Note: user-owned gas source.

Technical Specification

Items	Technical Parameters
Dart mass	50-2000g, increment: 5g, mass error ≤ 0.5%
Dart diameter	Method A Φ38±1mm; Method B Φ50±1mm
Specimen holder	outer Φ150mm, inner Φ125mm
Impact height	Method A 660mm; Method B 1500mm
Test Range	Method A:50~2000g，Method B:300~2000g
Test accuracy	1g
Dimensions(L×W×H)	550mm × 400mm × 1340mm
Weight	47kg
Power supply	AC 220V 50Hz

Standards

ASTM D1709
ISO 7765-1
GB/T 9639
GB/T 15267
JIS K7124

MTEC-GB-LQ Falling Ball Impact Tester

Function

This instrument tests the impact resistance in the installation process of the end products or components of electrical equipment, appliance, plastics, electronic products, communication sets, etc. So as to check whether there is any problem in the product structure.

Features

·Easy operation, auto process data.

·Accurate test results.

Configuration

Power cable, steel ball, cross screwdriver, allen wrench, wooden box

Technical Specification

Items	Technical Parameters
Impact height	adjustable between 20~2000mm
Ballweight	50g, 100g, 250g, 640g（food package）60g, 100g（drug package）
Fixture size	150mm×150mm
Sample size	≤150mm×150mm
Power	1000W
Instrument size	450mm×500mm×2200mm
Power supply	AC 220V 50Hz

Standards

YBB 0021-2005

GB/T 14485-1993

MTEC-HP-100 Torque Testing Equipment

Function

HP-100 Torque Tester is applied for bottled packaging products, suction nozzle packaging products and hose packaging products. Cap opening torque is one of the key to control process parameters, has a great impact on the intermediate transport of products, as well as the final consumption.

Features

- LCD display, three kinds of measurement units
- Can move clockwise or anticlockwise, can test screwing locking or unscrewing open.

Standards

ASTM D2063
ASTM D3198
ASTM D3474
BB/T 0025
BB/T 0034

Technical Specification

Items	Technical Parameters
Test range	0.01-10N.m
Test accuracy	within ±1% F.S.
Clipping range	Ø10~150mm
Instrument size	240mm ×300mm ×145mm

MTEC-HP-200 Torque Testing Equipment

Function

HP-200 Torque Tester is applied for bottled packaging products, suction nozzle packaging products and hose packaging products. Cap opening torque is one of the key to control process parameters, has a great impact on the intermediate transport of products, as well as the final consumption. It' s the dedicated instrument to measure torque strength while screwing and unscrewing the caps of packaging bottles, tubes, spouts and so on, which is an indispensable test equipment in the production process.

Features

- The torque meter can measure the torque clockwise and counterclockwise, that is can test the screwing locking or unscrewing open.
- Three torque units options: lbf•in, kgf•cm, N•m.
- The measurement peak is automatically maintained to ensure that the test results are accurately recorded.
- Overload automatic alarm function can be set. Alarm torque can be customized.
- All calibration, setting and other parameters are automatically saved, no need reset after every reboot.
- Built-in 4.3-inch high-resolution touch screen, easy to operate.
- Built-in data query function, a single machine can query 10 sets of experimental data, and automatically calculate its maximum, minimum, average values and standard deviation.
- Built-in date and clock function and can be calibrated.
- With built-in printer and can print test results directly.

Technical Specification

Items	Technical Parameters
Test range	0.001-20N.m
Test accuracy	1 grade
Clipping range	Φ5 ~ 230mm
Instrument size	410mm×320mm×200mm

Standards

ASTM D2063
ASTM D3198
ASTD 3474
BB/T 0025
BB/T 0034

MTEC-DS Tear Tester

Function

The tear tester (elemendorf method) is mainly used to measure tear resistance of paper and film. It is controlled by computer automatically and can be tested independently. Suitable for testing tear resistance of film, PVC, polyolefin, polyester, composite film, sheet, non-woven fabric, textile, paper and board, etc.board, etc.

Configuration

Main machine body, software, communication cable, power cable, 1800gf pendulum, weights (400gf, 800gf, 1400gf, 2800gf, 6400gf, 250gf)
User provide: computer, gas source 0.2~0.4Mpa

Technical Specification

Items	Technical Parameters
Test range	0-6400gf 0-18000mn
Tearing arm	104±1mm
Initial tearing angle	27.5°±0.5°
Gas supply pressure	1MPa
Gas supply port	Φ6mm polyurethane pipe
Indication error	within ±0.5% in 20%-90% of max range
Relative fluctuation	within 1%
Instrument size	430mm x370mm x 650mm
Power supply	AC220V 50Hz

Standards

ASTM D1922
ASTM D1424
ASTM D689
ISO 6383
ISO 1974
GB/T 16578.2
GB/T 455
TAPPI T414

®

MTEC-MX2
Leak and Seal Strength Tester

Function

Suitable for the food, pharmaceutical, cosmetic and other industries pouches and plastic bottles, cans . The test can effectively compare and evaluate the package sealing strength, heat sealing quality, whole bag up breaking the pressure seal leakage performance, compressive strength, the overall tightness.

Principle

Inject air pressure into sample bag or container and create pressure difference between inside and outside of the sample, and observe the status of leaking and bursting, so as to judge the heat seal performance and bursting status of sample.

Technical Specification

Items	Technical Parameters
Test range of sealing strength	0~1MPa
Test range of leakage	0~100KPa
Accuracy	0.5%
Gas source	compressed air, 0.4~1MPa
Range of sample’ s sealing size	0~400mm
Main machine body size	450x 380m x 220mm
Clips size	500mm × 250mm × 280mm
Weight	125kg
Power	1000W

Standards

GB 10440, GB 18454, GB 19741, GB 17447

ASTM F1140, ASTM F2054, ISO 11607-1

ISO 11607-2, GB/T 17876, GB/T 10004

GB/T 10005, BB/T 0003, BB/T0025, QB/T1871

YBB 00252005, YBB 00162002

Configuration

Main frame, a micro-printer, pneumatic clamps ,a power cord .

Note: user-owned gas source.

Optional: Test Accessories can be customized

MTEC-M1 Electronic Leakage Tester

Application

To test the hermetic sealing quality and performance of packaging bags, bottles, cans and so on, used in industries of food, beverage, pharmaceuticals, personal care and so on.

Features

· Compressed air，pneumatic drive.
· Wholly automatic, auto vacuum and keep for set time at set pressure, auto stop and return.
· Can manually pause and stop.
· LCD display test data and working status.
· Built-in printer can print report with date.

Configuration

Main frame.power line,vacuum barrel.
Note:Users prepare the air source.

Standards

GB/T 15171-1994

ASTM D3078-2002 (2013)

Technical Specification

Items	Technical Parameters
Vacuum degree	0 ~ -95KPa
Vacuum precision	±1KPa
Vacuum keeping time	0.1 ~ 9999.9s
Sample size	ϕ300×350 mm
Intake pressure	0.7~0.8 MPa
Consumption of compressed air	20 L/min
Instrument size	Controller: 580(L)×345(B)×440(H)mm Effective size of vacuum chamber: Ø270 × 270mm
Net weight	12kg
Ambient temperature	10~40℃

MTEC-M2 Leakage Tester

Application

The Leakage tester GB-M2 is designed and manufactured in accordance with the relevant provisions of GB/T15171 Test method for leaks in sealed flexible packages. It is used to detect the sealing condition of plastic packaging bags and containers, and it is applied to used in industries of food, beverage, pharmaceuticals, personal care and so on. Through test can effectively compare and evaluate the sealing technology and sealing performance of packaging parts, and provide scientific basis for determining the relevant technical indicators. It can also be used to test the sealing performance of the specimens after dropping and compressing test.

Configuration

Leakage tester, Power cable, Air pipe, Vacuum tank+lid
Note:Users prepare the air source.

Features

· Compressed air, pneumatic drive.
· Wholly automatic, auto vacuum and keep for set time, auto stop and return.
· Can manually pause and stop.
· LCD display test data and working status.

Technical Specification

Items	Technical Parameters
Vacuum degree	0~-95KPa
Vacuum precision	±1%(indication error)
Vacuum keeping time	0.1s~60min
Compressed air pressure	0.4~0.6 MPa(4~6 kgf/cm2)
Compressed air consumption	20 L/min
Vacuum chamber size	Φ270mm × 270mm
Instrument size	Instrument size: 580mm × 345mm × 440mm Vacuum tank: Ø300 × 300mm (samll) Ø450 × 350mm(medium)
Net weight	12 kg
Working temperature	10~40℃
Vacuum degree	0~ -95KPa
Power supply	AC220V 50HZ

Standards

ASTM D3078

GB/T 15171

MTEC-M Leakage Tester

Application

To test the hermetic sealing quality and performance of packaging bags, bottles, cans and so on, used in industries of food, beverage, pharmaceuticals, personal care and so on.

Features

Compressed air, pneumatic drive wholly automatic, auto vacuum and keep for set time, auto stop and return can manually pause and stop

Standards

ASTM

D3078-2002(2013)

GB/T 15171-1994

Principle

Immerse closed sample filled with gas under water in test chamber, then create vacuum in the chamber; observe if there are bubbles emission from inside the sample to check the hermetic sealing status.

Technical Specification

Items	Technical Parameters
Vacuum degree	0~ -80KPa
Vacuum precision	±1%
Vacuum keeping time	0.1~99.99h
Sample size	ϕ300×350 mm
Intake pressure	0.7~0.8 Mpa
Consumption of compressed air	20 L/min
Instrument size	Controller: 300mm×380mm×500mm Effective size of vacuum chamber: Ø270 × 270mm
Net weight	20kg
Ambient temperature	10~40℃
Power supply	220V 50HZ

MTEC-GH Electronic Thickness Tester

Function

GH-D Electronic thickness tester is a high-precision digital thickness tester together machine with electronic, easy to operate. Measuring result displays as number, and could be connected with computer for automatic control. Mainly used to direct measure or compare measure the plastic and paper.

Features

- High precision(0.1um), digital display, stable, easy to operate.
- Measuring mode: manual and automatic.
- Single point and multiple points measurement.
- LCD display, real time display of max, min, average and current values.
- With built-in printer, can print test report.

Configuration

Main frame, a power line, a measuring head.

Technical Specification

Items	Technical Parameters
Test range	0~6mm
Resolution	1μm
Sample spacing	0~100mm
Measurement points	0~30 points
Measuring force	0.4N
Measuring head	Φ6 mm (customizable)
Operating temperature	0 ~ 40℃
Power supply	220V 50Hz

Standards

ASTM D645, ASTM F2251, ASTM D374, ASTM D1777, ISO 4593, ISO 534, ISO3034, GB/T6672, GB/T451.3, GB/T 6547, TAPPI T411, DIN 53105, DIN 53353, JIS K6250, JIS K6328, JIS K6783, JIS Z1702, BS 3983, BS 4817

MTEC-GH3 Digital Thickness Tester

Function

This instrument is used to measure thickness of plastic film, thin sheet, paper and other materials or compare the seal condition of plastic packaging bags and packaging containers. It is widely used in industries of packaging, food, daily chemical, pharmaceutical factory and so on.

Technical Specification

Items	Technical Parameters
Measuring range	0.001 ~ 12.5 mm
Min. value	0.001mm
Error	≤2%
Value variation	1μm
Measuring force	0.5~1N
Surface roughness of measuring head	Ra < 0.2μm
Working temp	0 ~ 40℃

MTEC-GHE Vacuum Coating Thickness Tester

Test Principle

GH-E Vacuum Coating Thickness Tester can be applied to various vacuum aluminum film, aluminized paper, and other conductive coating materials to test the resistance value, evenness, thickness and so on.

Technical Specification

Items	Technical Parameters
Thickness test range	50-1200
Square resistance test range	0-30Ω
Square resistance test accuracy	0.10-29.999Ω

Items	Technical Parameters
Test sample size	300mmX100mm
Instrument size	300mm×300mm×150mm

MTEC-GxC1 Ink Rub Tester

Function

This instrument tests the abrasion resistance of ink layer of relief printing, light sensitive layer of PS board, and coating layer of other related products. LCD display test data, easy to use.

Features

- Testing parameters input by press key, and having the memory function of outage;
- Controlling and solving the problems of poor grade of print ink abrasion resistance, low rub resistance.
- It is compatible with PS version of light-sensitive layer of abrasion resistance testing, analysis and forecasting PS version of the anti-print forces.
- Microcomputer control, LCD dynamic display.

Technical Specification

Items	Technical Parameters
Rub pressure	20 ± 0. 2N
Rub speed	43 times/minute
Rub times	0~999 times
Rub area	155×50mm
Sample size	230×50mm, can join short samples together
Instrument size	26×29×30cm

Standards

GB/T 7706-2008

ASTM D5264

TAPPI T830

MTEC-GxB2 Adhesive Tape Disk-peeling Tester

Function

To test the ink layer bonding strength of printed (intaglio) plastic film, composite film, cellophane and so on; test the layer bonding status formed by vacuum coating, surface coating and composite technology etc.

Principle

According to standards, choose glass tape paper and ink printed sample, bond them at standard loading, speed and rolling times; put them for a while and strip the bonded sample with Disk Stripping Tester, to see status of ink layer stripped off, so as to determine the ink fastness.

Standards

GB/T 7707-2008

Technical Specification

Items	Technical Parameters
Plate pressure	100N
Peeling speed	0.8m/ s
Plate A dimension	170mm x 55mm
Plate B dimension	65mm x 55mm

GBPI®

MTEC-GXY1 Adhesive Tape Rolling Pressing Machine

Function

GX-Y1 Adhesive Tape Rolling Pressing Machine meets GB/T 7707-2008, JIS C2107, JIS Z0237 and related test standards. It is applied to test the fastness combination of gravure printing process production of plastic film and cellophane decoration prints (including the composite film printing products). It is also used for vacuum coating, surface coating, composite and other related processes to form the surface layer attached to the state test.

Features

The exterior design is exquisite, and the operation is simple.
Test results accuracy is high.

Technical Specification

Items	Technical Parameters
Rolling speed	300mm/min
Roller Mass	20N ± 0.5N
Rolling Times	1 ~ 999900
Roller diameter	84mm
Roller width	45mm
Dimensions	400mm×180mm×350mm
Power	100W
Power supply	AC220V 50Hz
Weight	20kg

Standards

GB/T 7707-2008

JIS C2107

JIS Z0237

MTEC-N2000Z Box Compression Tester

Function

It is applicable to carry out proof pressure, deformation and overstow testing on corrugated case, honeycomb plate etc.

Configuration

Main frame, a clamp, a power line, a data line.
User owned: A computer

Standards

- ASTM D642
- ASTM D4169
- ISO2872
- ISO12048
- GB/T16491
- GB4857.4
- TAPPI T804
- JIS Z0212

Technical Specification

Items	Technical Parameters
Maximum load	20KN
Effective measurement range	0.04%-100%
Accuracy rate	Within ±1% of the indicating value (1 grade)
Effective testing space	800mm×800mm× 800mm
Testing Force resolution	0.001N
Range of test speed	0.01~200mm/minute (infinitely variable speeds)
Speed accuracy	Within ±1% of the indicating value.
Accuracy of displacement measurement	Within±1% of the indicating value.
Lifting device	fast (200mm/min) /slow (10mm/min) two speeds, can realize inching
Dimensions	1360mm×500mm×1400mm
Power	1000W
Power supply	AC 220V 50Hz
Weight	300kg

MTEC-N200Z Box Compression Tester

Function

Test proof pressure of the packaging bag, pressure is controlled by gas and could be adjusted within the range as your request.

Features

- Using the professional sensor, and displays the correct and reliable result.
- Pressure could be adjusted within measurement range, meeting customer's different request.
- Table standing design for sitting operation, easy and comfortable.

Technical Specification

Items	Technical Parameters
Measurement range	0~2000N (optional)
Measurement distance	0-100mm
Test accuracy	0.1N
Effective testing space	200mm ×14mm (customizing available)
Test plate	1 (could choose 3 test plates)
External Dimension	360mm × 280mm ×510mm
Air pressure	0 ~ 0.6Mpa
Power	220V，50Hz

Configuration

Main frame, a power line

Users owned

Air source

MTEC-N200A Compression Tester

Function

This instrument tests the compression resistance and blast resistance of packaging bag. It is applied in quality inspection organizations, drug control institutions, research institutes, packaging, thin film, food companies, pharmaceutical enterprises, personal care industry and so on.

Features

- Fully functional, multiple parameters setting and test.
- Wholly automatic, can set auto judgment, auto return and stop; auto process data.
- Built-in operation system can test independently without computer.
- LCD display test data and working state.
- Can set fixed speed and measure the force, test speed is adjustable.
- Can set fixed pressure and measure displacement.
- The control unit can choose built - in type (compact, space-saving) or external type (easy to upgrade, maintain and operate independently without computer).
- Professional software, simple interface, easy to operate.
- Display multiple curves; can zoom and move curves freely.
- Simple calibration of force sensor.

Technical Specification

Items	Technical Parameters
Test range	0~3000N (optional)
Test speed	0~500mm/minute (infinitely variable speeds)
Test distance	0-135mm
Valid working area	500mm × 400mm
Instrument size	550mm × 410mm ×860mm
Power	1000W
Power supply	AC220V 50Hz

Configuration

Main frame, power cable, data cable, software usb flash drives, allen wrench, wooden box, cross screwdriver

User provide: Power supply 500w 220V 10A, three holes socket, ground wire, 1 set of computer(with nine-pin COM port), XP system/Windows7

MTEC-GY1 Crush Tester

Function

Test corrugated core paper and kraft paper, the pressure strength of vertical direction. cooperate with accessories can test the vertical pressure strength, bonding strength and flat strength of board .

Configuration

Main frame, a power line, a measuring head.

Standards

TAPPI T808

JIS P8126

Technical Specification

Items	Technical Parameters
Measuring range	30 ~ 3000N
Resolution	1N
Function options	flat pressure side pressure, bonding strength, ring crush strength.
The pressure plate size	100 x 100mm (or according to customer specify)
Experimental stroke	70mm
Test Speed Default	12.5 ± 2.5mm/min and can be switched manually governor 5 ~ 100mm/min
Weight	34kg
Power	1000W
Power supply	220V/50Hz
Dimensions	330x350x510mm

MTEC-RHBT10
Paper Cup/Paper Bowl Stiffness Tester

Standards

QB/T 2294-1997

ISO 5628

JJG157-1995

Function

This product is a dedicated instrument to measure the stiffness of paper cup and paper bowl. It is designed based on the technical requirements of the standard: JJG 157-2008verification regulation of universal tension and compression testing machines for non-metallic. This product is the requisite testing instrument for paper cup making companies and relevant research and inspection organizations.

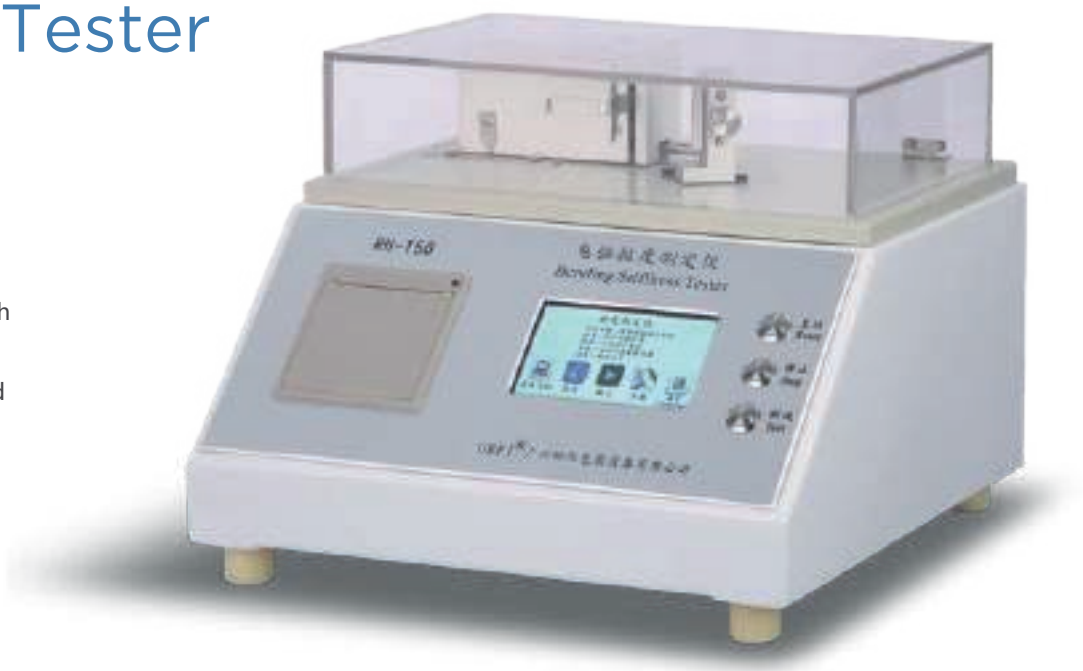
Features

- Adopts single chip micro-computer controlling technology, configured with aluminum panels, standard buttons are sensitive and durable;
- Liquid crystal display, with test data memory function; Automatic completion of the test, and the probe resets automatically;
- With test data statistical processing functions.

Technical Specification

Items	Technical Parameters
Test range	(1-30) N，Resolution0.01N
Accuracy of indicating value	indicating value error ±1%，variability of indicating value≤1%
Test speed	(50±2.5) mm/min （30~80) mm/min is adjustable
Relative motion distance of detectors	(9.5±0.5) mm （1~20） mm is adjustable
Centering error of detectors	≤0.2mm
Distance between two detectors	(40～120) mm
Instrument size	500×270×330mm
Power	1000W
weight	32kg

MTEC-RHT50 Paper Stiffness Tester



Function

Stiffness is an indicator to measure the flexural strength of paper. RH-T50 paper stiffness tester is a dedicated instrument to measure the stiffness of paper.

Features

- The instrument adopts single-chip microprocessor controlling technology, configured with aluminum panels, standard buttons are sensitive and durable;
- Liquid crystal display, with test data memory function;
- High-speed thermal printer output;
- Automatic completion of the test, and the probe resets automatically;

Standards

ISO 5628

Technical Specification

Items	Technical Parameters
Test range	0.5-500mN
Resolution	0.01mN
Accuracy	Indication error ± 1%, display value variability ≤1%
Test speed	300°/min or 200°min
Load arm length	Standard 50mm, 5 ~ 50mm (adjustable)
Nominal bending angle	7.5°, 15° (is adjustable)
Sample size	330mm×340mm×290mm
Power supply	AC220V,50Hz
Power	1000W
Sample size	70mm×38mm
Weight	14Kg

MTEC-P1 Bursting Strength Tester

Function

Testing the bursting strength for single layer or multilayer paper, the bursting strength for cloth, leather, paperboard, latten etc. Conforms to QB/T 1057-2004, GB/T 454-2002, GB 6545, ISO 2759, JIS P8112, ASTM D2210, TAPPI T403.

Technical Specification

Items	Technical Parameters
Measurement range	(40~1600) KPa
Resolution	(30±5)KPa
Measurement precision	Within ±0.5% of indicated value
Specimen clipping pressure	(0.6~0.8)MPa
System tightness	1min internal pressure drop < 10%pmax
Hydraulic oil	(95±5) ml/min
Machine size	57×53×50cm
Machine weight	47kg
Power	220V/50Hz

Standards

ASTM D2210

ISO 2759

GB/T 454-2002

GB 6545

QB/T 1057-2004

JIS P8112

TAPPI T403

Configuration

Main frame, a power line

Users owned

Air source

MTEC-P60 Standard Light Source

Function

Used for color observation, color contrast and color matching in a wide range of industries of printing, paints, printing ink, plastics, dyeing and so on.

Features

- With function of metamerism.
- No need of warm-up, no flashing, assuring fast and reliable color judgment.
- Low energy consumption, no heating up.
- Small in size, convenient to use.

Standards

CY3-1991

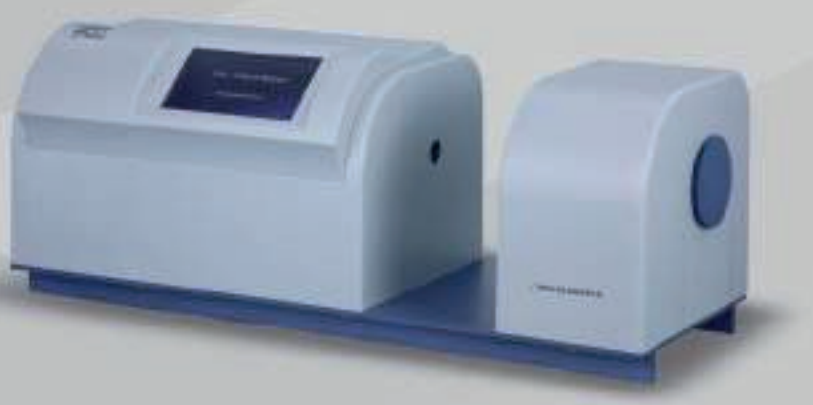
Technical Specification

Items	Technical Parameters
Light source	D65, TL84, F, UV
Outer size	71mm x 40.5mm x 57mm
Inner size	68mm x 38mm x 39mm
Weight	10kg

MTEC-SGW-810 Light Transmittance and Haze Tester

Function

To test the light transmittance and haze degree of all transparent and semi-transparent parallel plane samples (plastic plate, sheets etc), and turbidity or clarity of liquid samples (water, drinks etc), used in the industries of plastics, membrane, coatings and paints, printing ink, research institute and so on.



Features

- Adopt parallel lighting, hemispherical reflectance, and integrating sphere photoelectricity receiving.
- Adopt microcomputer automatic operating system and data processing system, can operate without knobs, convenient to use.
- With USB port, can store data in USB flash drive.
- Transmittance result displays at 0.01%, haze also displays at 0.01%.
- Thanks to the employ of modulator, the instrument is not influenced by ambient light, so test needs not to happen in dark room, which assure the accuracy of sample testing.
- Equipped with magnetic film clips and cup for liquid samples, bringing great convenience to users.

Standards

ASTMD1003-2007

GB2410-2008

JISK7105-81

Technical Specification

Items	Technical Parameters
Test range	light transmittance 0 ~ 100.0%, haze degree 0 ~ 30.00%
Accuracy	light transmittance: ≤1%; haze degree: 0.1% for H ≤ 0.5%;0.3% for H > 0.5%
Repeatability	light transmittance: 0.5%; haze degree: 0.05% for H ≤ 0.5%, 0.1% for H > 0.5%
Minimum reading	light transmittance 0.01%, haze degree 0.01%
Light source	Light source C (6774K)

MTEC-KGZ1C Intelligent Gloss Tester

Function

KGZ-1C Intelligent gloss Tester is used to test the glossiness of plastic film, paper,printing ink and adhesives. The sample can be multi-point measurement and data processing, and the average value, standard deviation, coefficient of variation and other parameters can be directly printed out. The machine has high precision and good stability, and can measure the gloss of coating, paper, plastic, ceramics, stone and metal and other plane products.

Features

- Highly intelligent, light touch operation.
- Optional automatic mode and manual mode.
- Single point test or multiple points (no more than 10) test, auto calculate average value, mean square root and coefficient of variation and print out.

Technical Specification

Items	Technical Parameters
Test range	0-199.9 gloss units
Instrument Accuracy	±1.0 gloss unit
Instrument Stability	No more than 0.5 gloss unit/30 minutes
Detector size	180mm×100mm×50mm
Instrument Power	25w
Power supply	AC 220V，50Hz

Standards

ISO-2813、ISO8254、TAPPI-T653、ASTM-D1834、ISO-2767 、ASTM-C346、ASTM-D2457、JIS-E8741、ISO-2813、ASTM-D2457、TAPPI-T480、ISO-2813

MTEC-BR Melt Flow Indexer

Function

It is a high precise melt testing instruments for the measurement of thermoplastic melt flow rate (MFR) in quality control and research applications.
It's suitable to measure melt flow character of PP, PE, POM, AR, PC, ABS plastics and plastic productions, widely used in plastic raw material production, petrochemical industry, scientific research departments and commodity inspection department.

Principle

The instrument is applied to test material molten status by high temperature furnace in a predetermined temperature condition. The molten status of analyte is extruded through a certain diameter orifice under a predetermined weight load. The "melt (mass) flow rate" often used to express the viscosity ,fluidity and other physical properties of the polymer material in the molten state in the study of industrial enterprises and research institution. The melt index refers to the average weight of the extrudate paragraphs sample translate to extrusion amount in 10 minutes.

Standards

ISO 1133

GB/T9643

GB/T3682

JB/T5456

Configuration

Main machine body, weights, die port, cleaning stick

Technical Specification

Items	Technical Parameters
Test Method	melt-mass flow rate method (MFR); melt-volume flow rate method
Temperature range	room temperature ~ 450 ℃
Test accuracy of mess	0.1g
The temperature fluctuation	≤ 1 ℃
Temperature Resolution	0.1℃
Temperature recovery time after feeding barrel	≤ 4min
Cutting mode	automatic timed cut (0.1 ~ 999s)
The inner diameter of the die	Φ2.095 ± 0.005mm
Inner diameter of the barrel	Φ9.550 ± 0.025mm
Standard load	3.187 ~ 211.82N total of eight grade, accuracy ≤ ± 0.5%
Power	1000W

MTEC
Electronic Scales

Features

· Personalized design, novel structure, attractive appearance and excellent performance
· New generation electromagnetic weighing cell makes the product precision have reliable guarantee.
· Have many kinds of applications, such as full automatic malfunction detection, automatic calibration and overload protection
· Have the functions of counting, percent and unit conversion and so on, so that the operation is convenient and reliable.
· Have built-in RS232C interface, and connect a computer and a printer and so on directly.

Technical Specification

Type	Weighing range	Precision	Scale size
Precision balance	0-200g	1mg	Φ140mm
Analytical balance	0-100g	0.1mg	Φ140mm

TESTING
INSTRUMENTS

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