FAV Group of Companies

Fiber Testing











Contents

Strength
YG011 Fiber Bundle Strength Tester (Stelometer) 6
KX101 Pressley Fiber Strength Tester 6
YG005X Fiber Tensile Tester 7
YG005XD Automatic Fiber Tensile and Fineness Test System 7
YG003S/YG005S Electronic Single Fiber Strength Tester 8
Length
Y131 Comb Sorters 9
Y111 Roller Fiber Length Analyzer 9
KX730 Fibrograph 9
Fineness
Y171 Series Fiber Cutter 10
JN-B Series Torsion Balance 10
Y175 Series Cotton Fineness Meter (Micronaire Tester) 11
Y145B Wool Fineness Tester 11
Y172 Fiber Microtome (Hardy) 12
YG002C Series Computerized Fiber Fineness Analysis System 12
YG002A Digital Biological Microscope 13
ZK100F Fiber Linear Density Tester (Vibroscope Method) 13
Moisture
SK-100 Moisture Meter 14
MBS-3 Cotton Package Moisture Meter 14
Aqua-Boy TEMI Textiles Moisture Meter 15
YG802D Semi-automatic Fast Eight-basket Oven 15
Others
FY111F Fiber Crimp Tester 16
YG252A-1 Melting Point Tester 16
XH-1 Series Fiber Thermal Shrinkage Tester 17
YG981B Series Rapid Oil Extraction Apparatus 17
F800 Fiber Analyzer 18
D75 Standard Light Box for Classifying Cotton 18
YG321 Automatic Fiber Specific Resistance Tester 19
Y178 Fiber Bulkometer 19
YG041 Trash Analyzer 20
Y301 Series Sliver and Roving Length Sampler 20

Alphabetic Contents

Aqua-Boy TEMI Textiles Moisture Meter 15
D75 Standard Light Box for Classifying Cotton 18
F800 Fiber Analyzer 18
FY111F Fiber Crimp Tester 16
JN-B Series Torsion Balance 10
KX101 Pressley Fiber Strength Tester 6
KX730 Fibrograph 9
MBS-3 Cotton Package Moisture Meter 14
SK-100 Moisture Meter 14
XH-1 Series Fiber Thermal Shrinkage Tester 17
Y111 Roller Fiber Length Analyzer 9
Y131 Comb Sorters 9
Y145B Wool Fineness Tester 11
Y171 Series Fiber Cutter 10
Y172 Fiber Microtome (Hardy) 12
Y175 Series Cotton Fineness Meter (Micronaire Tester) 11
Y178 Fiber Bulkometer 19
Y301 Series Sliver and Roving Length Sampler 20
YG002A Digital Biological Microscope 13
YG002C Series Computerized Fiber Fineness Analysis System 12
YG003S/YG005S Electronic Single Fiber Strength Tester 8
YG005X Fiber Tensile Tester 7
YG005XD Automatic Fiber Tensile and Fineness Test System 7
YG011 Fiber Bundle Strength Tester (Stelometer) 6
YG041 Trash Analyzer 20
YG252A-1 Melting Point Tester 16
YG321 Automatic Fiber Specific Resistance Tester 19
YG802D Semi-automatic Fast Eight-basket Oven 15
YG981B Series Rapid Oil Extraction Apparatus 17
ZK100F Fiber Linear Density Tester (Vibroscope Method) 13

YG011 Fiber Bundle Strength Tester (Stelometer)



Application

To determine the breaking strength and elongation at break of fibers in a flat bundle. Associated with JN-B torsion balance, it can be used to determine the breaking tenacity of fibers in the flat bundle.

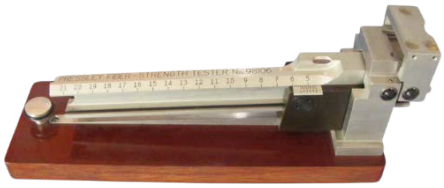
Standards

ISO 3060 | ASTM D1445 | ASTM D2524 | GB/T 13783 | BS5116

Key Specification

Gauge Length	0 or 3.2mm
Force Range	20N~70N
Loading Speed	10N/s, adjustable
Elongation Range	0~50%

KX101 Pressley Fiber Strength Tester



Application

To determine the breaking strength of cotton fibers in a flat bundle. Associated with JN-B torsion balance, it can be used to determine the breaking tenacity of fibers in the flat bundle.

Standards

ISO 3060 | ASTM D1445 | ASTM D2524 | GB/T 13783 | BS5116

Key Specification

Gauge Length	0 or 3.2mm
Force Range	5~20lbf
Correction Factor of Tenacity	0.9~1.1

YG005X Fiber Tensile Tester

Application

To perform the tensile test of a dry/wet fiber. Controlled by the computer, and the real time force-elongation curve during a tensile test is displayed on the computer screen. The results are analyzed and saved in the computer.



Standards

ISO 5079 | ASTM D3822 | GB/T 14337

Key Specification

Clamping Method	Pneumatic
Force Range	100cN
Force Resolution	0.01cN
Max. Extension	100mm
Tensile Speed	1~100mm/min

YG005XD Automatic Fiber Tensile and Fineness Test System

Application

An upgraded product of YG005X Fiber Tensile Tester and ZK100F Fiber Linear Density Tester.



Standards

ISO 5079 | ASTM D3822 | GB/T 14337

Key Specification

Clamping Method	Pneumatic
Force Range	100cN
Force Resolution	0.01cN
Max. Extension	100mm
Tensile Speed	1~100mm/min



YG005S

YG003S/YG005S Electronic Single Fiber Strength Tester

Application

To determine the breaking strength, elongation at break, load at specified elongation, elongation at specified load, creep property of single textile fibers, such as, cotton, wool, ramie, silk, glass fiber and chemical fibers.

Standards

ISO 5079 | ASTM D3822 | GB/T 14337

Key Specification

Model No.	YG003S	YG005S
Clamping Method	Manual	Pneumatic
Force Range	200cN	
Force Resolution	0.01cN	
Max. Extension	150mm	
Tensile Speed	2~100mm/min	

Y131 Comb Sorters



Application

To produce staple diagrams for fibers up to 50 mm length, suitable for wool fibers.

Standards

ISO 920

Key Specification

Width of Tray	10mm
Number of Tray	31

Y111 Roller Fiber Length Analyzer



Fiber Draw-off unit

Application

To determine the length of short cotton fibers by ranking them according to their length.

Standards

GB/T 6098

Key Specification

Front Roller Diameter	φ8mm
Rear Roller Diameter	φ16mm
Spacing Between	20~60mm
Input and Output Roller	adjustable



Fiber Analyzer

KX730 Fibrograph



Application

To accurately and rapidly determine the mean length, upper half mean length and uniformity index of cotton fiber sample by photo-electric method.

Standards

ASTM D1447 | GB/T 20392 | GB 1103

Key Specification

Fiber Length Measuring Range	18~50mm
Tolerance of Upper Half Mean Length	±0.5mm
Tolerance of Uniformity Index	±1.5%

Y171 Series Fiber Cutter



Application

To cut a specified length of fiber. Associated with JN-B Torsion Balance, the fiber's linear density can be determined.

Standard

GB/T 14335	GB/T 14336
GB/T 6100	BISFA Testing Methods

Key Specification

Model No.	Y171A	Y171B	Y171C	Y171D
Width of Blade	10mm	20mm	25mm	30mm
Length of Blade	45mm			



JN-B Series Torsion Balance

Application

It is a kind of sensitive, precision measuring instrument for weighing small objects. It applies to electronics, textiles, metallurgy, agriculture, industry and other fields.

Key Specification

Model No.	Measure Range (mg)	Graduated Value (mg)
JN-B-5	0~5	0.01
JN-B-10	0~10	0.02
JN-B-25	0~25	0.05
JN-B-50	0~50	0.1
JN-B-100	0~100	0.2
JN-B-250	0~250	0.5
JN-B-500	0~500	1
JN-B-1000	0~1000	2
JN-B-2500	0~2500	5

Y175 Series Cotton Fineness Meter (Micronaire Tester)



Y175

Application

To determine the micronaire value of loose disorientated cotton fibers taken from bales, laps and silvers or other sources of lint cotton.

Standards

ISO 2403 | ASTM D1448 | GB/T 1103 | GB/T 6498

Key Specification

Model No.	Y175	Y175-I
Display Method	Dial	Digital
Measuring Range	2.5~6.5	2.5~6.5
		2.9~6.5
Accuracy	±0.1	±0.05



Y175-I

Y145B Wool Fineness Tester



Application

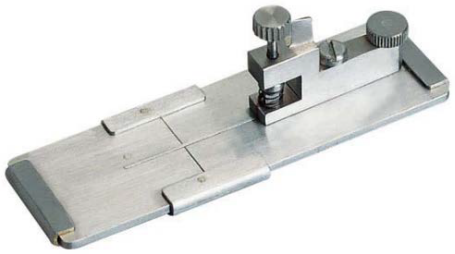
For wool purchase inspection, production and trade, to determine the wool fineness by using airflow method.

Standards

ISO 1136 | ASTM D1282 | BS 3183 | GB/T 11603

Key Specification

Measuring range	12~50μm
Accuracy	0.1μm
Test time	15s



Y172 Fiber Microtome (Hardy)

Application

To cut thin cross-section slices of fiber or yarn in order to observe their longitudinal or cross-sectional appearance under the microscope. It can be used to prepare the specimens for YG002 Series computerized fiber fineness analysis system.

Standards

ISO 137	BS 2043	ASTM D2130

Key Specification

Slice Area	3×0.8mm
Minimum Slice Thickness	20μm



YG002C Series Computerized Fiber Fineness Analysis System

Application

To determine the fiber diameter or fiber composition by the microscopic method.

Standards

ISO 137	AATCC 20	GB/T 10685
ISO 17751	AATCC 20A	GB/T 16988

Key Specification

Model No.	YG002C	YG002C1	YG002C2
Test Item	Diameter	Diameter Content	Diameter, Content, Sectional area
Measuring Range		2~200±0.5um, adjustable	
Measuring Repeatability		±0.1μm	
Objective Lens		4X, 10X, 20X	

YG002A Digital Biological Microscope



Application

It is widely used in biology, medicine, industry, agriculture and other fields, and are ideal instruments for medical treatment teaching, scientific research and other fields. With 10.5" touch screen android pad and pre-installed measure software, you can do all of the watch, capture, measure & analysis work on the high quality optical microscope.

Key Specification

Eyepiece	WF10x/20mm
Objective Lens	4X, 10X, 40X(S), 100X(Oil, S)
Abbe condenser	N.A.1.25, center adjustable
Display	10.5" touch screen
Control system	Android 11 tablet, pre-installed measure software

ZK100F Fiber Linear Density Tester

(Vibroscope Method)



Application

To determine linear density of single fiber by means of vibroscope method. The natural vibration frequency of fiber is measured under specific vibration length and tension and its linear density is calculated by string vibration equation.

Standards

ISO 1973 | GB/T 16256 | GB/T 14335

Key Specification

Measuring Range	0.8~40dtex
Measuring Error	≤±2%
Clamping Length	20mm
Length error	≤±1%



SK-100 Moisture Meter

Application

To measure the moisture content of various textile raw materials, such as cloth, yarn, wool, leather, etc.

Key Specification

Type	Double needle	Single needle
Test range	0~80.0%	0~99.9%
Resolution	0.1%	0.1%
Test method	DC resistance type	High frequency wave
Display	LCD	LCD



MBS-3 Cotton Package Moisture Meter

Application

An upgrade product of MBS model instrument achieving fast and accurate measurement of the moisture regain of cotton package.

Key Specification

Moisture regain range	3.0%~13.0%
Temperature compensation range	-30℃~+50℃
Moisture regain accuracy	3.0%~6.0% ±0.2%
	6.1%~11.0% ±0.1%
	11.1%~13.0% ±0.2%
Temperature accuracy	-30℃~10℃ ±2℃
	10℃~50℃ ±1℃

Aqua-Boy TEMI Textiles Moisture Meter



Application

Calibrated and tailor made specifically for analyzing the moisture content in textiles.

Key Specification

Measuring Range	2.5% ~ 24.5%
Accuracy	±0.1%
Display	Analogue

YG802D Semi-automatic Fast Eight-basket Oven



Application

To determine the moisture content and moisture regain of various textile materials or relative products.

Standards

ISO 6348	ISO 6741-1	ASTM D1576
ASTM D2495	ASTM D2654	GB/T 5883

Key Specification

Drying Time	<45min for cotton
Temperature Range	RT ~ 150°C
Temperature Accuracy	±1°C
Temperature Uniformity	±2°C
Balance Capacity	500g
Balance Accuracy	0.01g



FY111F Fiber Crimp Tester

Application

To determine the crimping performance of single chemical fiber and natural fiber automatically.

Standards

GB/T 14338

Key Specification

Load Measuring Range	0~2,000 (10^{-3}cN)
Load Resolution	0.1(10^{-3}cN)
Load Measuring Error	≤±1%
Clamping Length	20mm
Length Resolution	0.01mm



YG252A-1 Melting Point Tester

Application

To test the melting point of powder, PET chip, chemical fiber and etc. (except for dark opaque objects). Test curve, data and arithmetic mean value can be displayed and printed.

Standards

JBT 20204

Key Specification

Test Range	50°C~320°C
Accuracy	±0.5°C
Heating Speed	2, 3, 4, 5°C/min, adjustable
Melting report	Manually/Automatically

XH-1 Series Fiber Thermal Shrinkage Tester



XH-1

Application

To conduct the thermal shrinkage test of synthetic staple fibers, e.g., polyester fiber, nylon fiber, polypropylene fiber.

Standards

FZ/T 50004



XH-1A Fully-automatic

Key Specification

Model	XH-1	XH-1A
Range	0~25%	0~45%
Accuracy of shrinkage	≤±0.1%	
Accuracy of Length	±0.01mm	
Working Station No.	35	36
Oven	Excluded	Included

YG981B Series Rapid Oil Extraction Apparatus



Application

To quickly extract the oil out of the fiber samples and then calculate the oil content.

Standards

GB/T 6504

Key Specification

Model No.	YG981B-III	YG981B-IV
Working Station No.	3	4
Temperature Range	RT ~ 150°C, settable, LED display	
Temperature Accuracy	±1°C	
Pressuring Method	Weight	

F800 Fiber Analyzer



Application

To quickly and accurately determine the fiber composition of two component blend of wool and synthetic fibers by the chemical method.

Standards

AATCC 20/20A | BS 4407 | M&S P100

Key Specification

Measuring Range	0.1%~100%
Sample Weight	0.5g~3g
Working Station No.	6

D75 Standard Light Box for Classifying Cotton



Application

To provide a standard and stable light source to classify cotton.

Standards

ISO 4911 | GB/T 13786

Key Specification

Light Source	D75 lamp, 40W, 48in
Number of Lamps	4 (optional: 6)
Correlated Color Temp.	(7500±200) K
Color Rendering Index	≥93

YG321 Automatic Fiber Specific Resistance Tester

Application

To measure the resistance value of fiber with certain density under certain geometry, and then the specific resistance value is converted according to the filling degree of the fiber.



Standards

GB/T 14342

Key Specification

Test Voltage	Grade 1: 1V
	Grade 2: 100V
Measuring Range	Voltage 1V: 10Ω~10^7Ω
	Voltage 100V: 10^6Ω~10^{14}Ω
Sample Weight	15g±0.1g

Y178 Fiber Bulkometer

Application

To quickly measure the bulk and resilience of loose fiber.



Standards

IWS TM265

Key Specification

Cylinder Area	50cm^2
Load	10g/cm^2, 30g/cm^2
Scale Range	0~150mm



YG041 Trash Analyzer

Application

To determine the percent of trash content in lint cotton, cotton lap, cotton sliver and cotton type chemical fibers.

Standards

ASTM 2812 | GB/T 6499

Key specification

Feed Roller Width	490mm
Feed Roller Diameter	φ57.15mm
Feed Roller Speed	0.9rpm
Taker-in Diameter	φ238.76mm
Taker-in Speed	900rpm



Y301



Y301D

Y301 Series Sliver and Roving Length Sampler

Application

To wind a certain length of sliver or roving made of cotton, wool, silk, etc., then to determine the linear density (count) of sliver or roving by using a precise balance.

Key Specification

Model No.	Y301	Y301D
Drive Mode	Manual	Electric
Platen Circ.	1000mm/1yard	500±1mm
Platen Width	250mm	430mm
Preset Length	/	0.1~999.9m