FAV Group of Companies

Garment Testing

Flammability, Down Feather, Zipper and Button











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YG815A Vertical Flammability Tester

Application

To determine the flame spread properties of vertically-oriented specimens from children's sleepwear, fabric and other textile materials.

Standards

ASTM D6413 | 16 CFR Part 1615, 1616

Key Specification

Inner diameter of burner	Φ11mm
Angle between head and vertical line	25°
Space between the top and specimen	17mm
Flame height	40±2mm
Preheat time	1~999s
Timing range	0.1~999.9s



YG815B Horizontal Flammability Tester

Application

To evaluate the flammability performance of textiles by determining the flame spreading speed in the horizontal direction.

Standards

FZ/T 01028 | ASTM D5132

Key Specification

Inner diameter of igniter	Φ9.5mm
Space between top and space	19mm
Flame height	38±2mm
Igniting time	0~99.99s, settable
Timing range	0.1s~9h59min59s

YG815C 45 Degree Automatic Flammability Tester (JIS)



Application

To determine the burning area and length of textiles or the melting behavior of other materials.

Standards

GB/T 14645 | JIS L1091

Key Specification

Ignition mode	Method A	Method B
Internal diameter of igniter	Φ6.4mm	Φ2mm
Angle between sample holder and horizontal plane	45°	
Flame height	45±2mm	
Timing range	0.1s~999.9s	

YG815D AFCC 45° Flammability Tester



Application

To determine the burning characteristic of textiles by igniting the surface of the specimen held at an angle of 45°.

Standards

ASTM D1230 | 16 CFR Part 1610 | GB/T 14644

Key Specification

Igniter caliber	4 $^{1/2}$ syringe needle
Angle of specimen rack	45°
Distance between igniter top and Specimen surface	8mm
Flame height	16mm, adjustable



YG815E Flammability Tester

(Automotive Interior Materials)

Application

To conduct burn rate and burn resistance tests on automotive interior materials by determining the flame spreading speed in the horizontal direction.

Standards

ASTM D5132 | JIS D1201 | GB 8410

Key Specification

Internal diameter of burner	Φ9.5mm
Distance between burner top and specimen	19mm
Flame height	38±2mm
Timer range	0~999.9s



YG815F Protective Clothing Flame

Spread Tester

Application

To determine the limited flame spread properties of vertically oriented textile fabrics and industrial products when subjected to a small defined flame.

Standards

ISO 15025

Key Specification

Nozzle opening	0.19mm
Horizontal flame length	25±2mm
Vertical flame height	40±2mm
Flame application time	10s, settable

YG815W Textiles Surface Burning Time Tester



Application

To determine the flame spread times of vertically oriented textile fabrics and industrial products in the form of single or multi-component fabrics when subjected to a small, defined flame.

Standards

ISO 6941: 2003 | AS 2755.2-1985

Key Specification

Ignition timing	0~99.99s
After flame time and afterglow time timer	0~99.99s, accuracy: ±0.01s
Flame height	40±2mm
Inner size of chamber	329×329×767mm

YG815BF Blanket Flammability Test Machine



Application

The equipment is suitable for bedding, including bed sheets, blankets, mattress, pillow, duvet, and similar products that used to cover on the bed of the flame retardant performance.

Standards

ASTM D4151

Key Specification

Flowmeter range	0-200ml/min
Flame height	16mm
Distance between burner top and specimen	8mm
Inner size of chamber	370×220×510mm



HV04 Horizontal & Vertical Flammability Tester

Application

To determine the resistance of inner material of planes to fire, according to vertical and horizontal flammability tests in Part I of Appendix F to FAR 25.

Standards

FAR-25 Appendix F

Key Specification

I.D. of burner	9.5mm
Flame center temperature	≥843 °C
Distance between burner top and specimen	19mm
Flame height	38.1mm, adjustable
Igniting time	0~99.99s
Inner size of chamber	305×305×610mm



UL94 Horizontal & Vertical Flammability Tester

Application

Used for plastic materials flammability test, to determine the flammability, burning rate, flame spread and flame resistance.

Standards

IEC 60695-11-10 | ISO 1210 | UL94 V0, V1, V2

Key Specification

Burner tube length	100±10mm
Burner inner diameter	9.5±0.3mm
Burner angle	0°, 45° adjustable
Flame height	20±2mm
Chamber volume	>0.55m^3

FY811 Multifunctional Flammability Tester



Application

The equipment is suitable for bedding, including bed sheets, blankets, mattress, pillow, duvet, and similar products that used to cover on the bed of the flame retardant performance.

Standards

ISO 6940 | ISO 15025 | BS 5438

Key Specification

Flowmeter range	0-200ml/min
Flame height	Adjustable

HF-2 Oxygen Index Apparatus



Application

To determine the minimum concentration of oxygen in admixture with nitrogen, which will support combustion of small vertical test specimen under specified test conditions and the results are defined as oxygen index values.

Standards

ISO 4589-2 | ASTM D2863 | GB/T 2406.2

Key Specification

Oxygen concentration measure mode	Sensor, response time≤3s
Oxygen range	0~100%, accuracy: ±0.1%
Gases required	O_2 and N_2
Pressure indicator	0~0.25Mpa, ±2.5%
Gas flow meter	1~15L/min, ±2.5%
Gas flow rate	(40±2) mm/s



DW5070 Fabric Down-proof Tester

Application

Adopted rubbing method to test puncture resistance performance for winter clothes, quilt lining which fill with fiber or feather or both, by counting the number of materials drilled through the fabric.

Standards

BS EN 12132-1

Key Specification

Clamp spacing	44mm
Eccentric	25±0.5mm
Testing speed	135r/min
Counter	0~99999r, 2700r(BS EN 12132)



DW5075 Series Feather and Down Fill Power Tester

Application

Used for testing the fill power of feather and down.

Key Specification

Model No.	DW5075	DW5075A
Internal diameter	245mm	288mm
Height of cylinder	500mm	750mm
Material of cylinder	Acrylic	
Diameter aluminum plate	240mm	284mm
Mass of aluminum plate	68.4g	94.25g

DW5076 Automatic Feather and Down Filling Power Tester



Application

To test the filling power of feather and down.

Standards

BS EN12130 | IDFB-FP | GB/T 10288

Key Specification

Measuring height	600mm, ±0.1mm
Cylinder inner diameter	288mm
Pressing plate weight	94.25g
Pressing plate diameter	284mm
Blowing speed	200~700mm/min
Blowing time	1~999s

DW5077 Fully Automatic Feather Down Conditioning Device



Application

Used for conditioning samples for fill power testing with the steam conditioning method.

Standards

IDFB | GB/T 14272 | GB/T 10288

Key Specification

Conditioning box	400*400*400mm(L*W*H)
Box mesh size	350*350mm
Rotation angle	360°
Outlet effective stroke	350mm
Distance between the nozzle and the mesh	10~15cm
Distance between the hair dryer and the mesh	1~2cm



DW5078 Down Transparency Meter

Application
To test the transparency/turbidity of down and feather.

Standards
GB/T 10288-2016

Key Specification

Graduated range	0~1000mm, graduated in 5mm division
Inner diameter	32±1mm
Material	Organic glass



YG819 Downproof Tester

Application
To test the downproof properties of fabrics using rotating tumbling box.

Standards
GB/T 12705.2 IDFL 20-1

Key Specification

Inner Dimensions of Rotating Box	450×450×450mm



YG819A Down proof Tester

Application
To test the down proof performance of more than 40cm length down jacket sample.

Standards
GB/T 14272-2021

Key Specification

Inner Dimensions of Rotating Box	600×600×600mm

FY-I Zipper Sliding Force Tester

Application

To determine sliding property of slider on metal or plastic zipper.



Standards

QB/T 2171 | QB/T 2172 | QB/T 2173

Key Specification

Strength range	30N
Load accuracy	≤±0.5%
Test length	80~220mm
Speed	1250±50mm/min

FY-II Zipper Reciprocating Tester

Application

To determine the resistance to reciprocating of zipper.



Standards

BS 3084 | SATRA TM50 | QB/T 2171~2173

Key Specification

Reciprocating stroke	75mm
Test speed	30 cycles/min
Lateral width of clamp	25mm
Longitudinal width of clamp	10mm
Closing angle of zipper	60°
Opening angle of zipper	30°
Lateral force angle	10°
Longitudinal force	5kg spring tension
Counter	0~999,999, settable



FY-III Zipper Slider Bursting Strength Tester

Application

To determine the bursting strength of zipper slider at specified deformation value.

Standards

QB/T 2171 | QB/T 2172 | QB/T 2173

Key Specification

Load range	0~200N
Force accuracy	≤ ±0.1% applied load
Deformation range	0.2~2mm (programmable)
Displacement accuracy	0.01mm
Test speed	10mm/min



FY-IV Zipper Slider & Puller Torsion Tester

Application

To determine the torsion strength of Zipper slider & puller.

Standards

Key Specification

Load range	0.1~2.5N.m
Force accuracy	≤ ±0.1% applied load
Test speed	1.5RPM
Loading direction	Clockwise
Unloading direction	Anti-clockwise
Torsion angle	0~300°

FY200 Snap Button Pullout Tester

Application

To assess the snap attachment strength of button which is very important to design and manufacture of garments of infants and children's wearing.

Standards

ASTM D7142

Key Specification

Model no.	FY200	FY200D
Display	Dial type	Digital type
Load capacity	30kgf	
Resolution	0.25kgf	
Pressing ring diameter	φ16mm (about 25 ligne)	
	φ30mm (about 47 ligne)	



FY200

FY300 Button Impact Resistance Tester

Application

To determine the impact resistance of plastic sew-through buttons.

Standards

ASTM D5171

Key Specification

Drop heights	32, 44, 67, 83, 95, 117mm
Impact ram	29.5oz (0.84kg)

