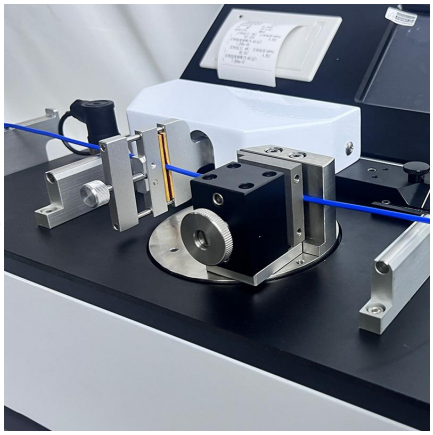
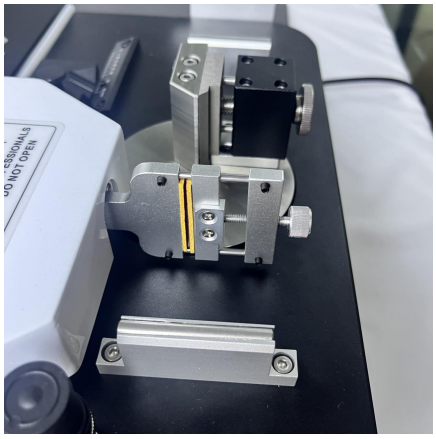
东莞市中谊精密仪器有限公司
Dongguan Zhongyi Precision Instruments Co., Ltd.

ZY-XCTD500 Wire Stiffness Tester





Customized: Wire/Cable Flexibility and Hardness Testing

Ⅰ.Product Overview:

The ZY-XCTD500 Wire Stiffness Tester (also known as the Material Static Bending Stiffness Tester) is a testing device independently developed and manufactured by Dongguan Zhongyi Precision Instrument Co., Ltd. It is specifically designed to evaluate the stiffness and resilience of flexible materials. The tester allows users to configure test parameters such as the specimen's longitudinal and transverse directions, tension level, test speed, and bending angle according to specific testing requirements. It provides reliable data support for quality control, process optimization, and material research and development in the wire industry.

Official website: https://zhongyiinstruments.com/ Gmail：pl981175805@gmail.com

Ⅱ.How It Works

Under specified conditions, measure the force or torque required to bend a specimen clamped at one end to a 90-degree angle, expressed in gf·cm (mN). If the specimen is too stiff or breaks when bent to a 90-degree angle, the specimen may be bent to a 7.5-degree angle; the measurement result may then be multiplied by 2 to obtain an approximate value, but this must be noted in the report.

Ⅲ.Key Technical Specifications

Customized based on actual materials; specifications are for reference only

Sample size	12 mm (customizable)
Actual measurement range	38 × (1–50) mm (customizable based on actual materials)
Test spacing	1 mm, 5 mm, 10 mm, 15 mm, 20 mm, 25 mm, 30 mm, 40 mm, 50 mm (adjustable)
Span accuracy	±0.1 mm
Measurement range	0–1000 g (0–10,000 mN) (customized based on actual material)
Sensor	Sensing accuracy ±0.1%
Resolution	0.01 mN
Bending angle	Unidirectional test angle 1–90° infinitely adjustable (customizable)
Multifunctional measurement	Forward stiffness, reverse stiffness

Angular velocity control	Adjustable from 0.5 to 5°/sec
Angular Accuracy	±0.1°
Measurement Thickness	(1–12.0) mm (customizable based on actual material)
Bending Time	(2–30 s)
Specimen Fixture	Manual clamping, automatic reset upon test completion
Clamping Method	Unrestricted clamping, capable of non-destructive continuous clamping
User Interface	7-inch touchscreen or button-operated testing
Signal Output	Standard computer signal output for connection to a computer (optional feature)
Print Output	Modular integrated thermal printer
Dimensions	400 mm × 400 mm × 260 mm (subject to actual measurements)
Net Weight	30 kg (subject to actual measurements)

Ⅳ.Applicable Materials

Wires and Cables: Power cords, electronic wires, guide wires, data cables

Metal Wires: Copper wire, aluminum wire, steel wire, metal wire

Fiber Wires: Glass fiber wire, carbon fiber wire, aramid fiber wire

Specialty Wires: Solder wire, tungsten wire, titanium alloy wire, etc.

Other Wires: Various linear materials requiring evaluation of bending stiffness