



## I .Product Overview:

The ZY-ZWK500 Paper Bowl Compression Tester (also known as the Microcomputer Compression Strength Tester) is suitable for testing the compression strength of paper bowls and boxes used in food packaging. It complies with the requirements and provisions of the GB/T 4857.4 standard, "Packaging—Methods for Pressure Testing of Transport Packaging." It features three built-in test modes to accommodate small paper tubes, paper bowls, paper drums, paper boxes, plastic beverage bottles and cans, to assess the pressure resistance of these packaging items and containers. It is used to determine whether the material's compressive strength meets standards and serves as a quality control testing tool for paper product packaging manufacturers and companies that use cardboard boxes.



ZY-ZWK500 Paper Bowl Compression Tester

## II .Applicable Standards:

GB/T 27591-2011 Paper Bowls; GB/T 1453-2005 Test Methods for Flat Compression Strength of Laminated Structures or Cores

GB/T 4857.4, GB/T 4857.3, ISO 12408, ISO 2234, QB/T 1048, ASTM D642, ASTM D4169,

## III.How It Works:

Place the specimen between the two platen plates, apply pressure to the specimen at a constant rate until it collapses, and measure the maximum force.

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

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#### IV. Core Technical Advantages:

1. 1.7-inch touchscreen with a dual-language (Chinese and English) system that displays compression resistance data in real time for greater visual clarity;
2. Allows direct setting of force and time; automatically resets upon test completion and records the carton's compression resistance results and deformation under load;
3. Open-frame design with dual ball screws and dual guide columns ensures excellent parallelism, stability, rigidity, and a long service life;
4. Intelligent features such as limit travel protection and overload protection ensure user safety;
5. Built-in power protection device safeguards the equipment against damage caused by excessive or unstable power supply magnetic fields;
6. The instrument is equipped with a high-speed micro-printer that prints data including test time, test number, maximum crushing force, and compression displacement;

#### IV. Key Technical Advantages:

Parameter item	Technical Specifications
Measurement Range	0–5000 N (other ranges available as options)
Accuracy	$\leq \pm 1\%$
Test Force Range	0.4%–100% FS
Compression Stroke	300 mm
Force Accuracy	$\leq \pm 1\%$
Force Resolution	0.01 N

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# 东莞市中谊精密仪器有限公司

Dongguan Zhongyi Precision Instruments Co., Ltd.

Parameter item	Technical Specifications
Displacement resolution	$\leq 0.1$ mm
Platen parallelism	$\leq 0.05$ mm
Test speed	$12.5 \pm 1$ mm/min
Lateral load capacity	71 × 21 mm / 10,000 N
Longitudinal load capacity	R = 20.5 mm / 2 × 10,000 N
Axial Deviation Protection	Brass bushing / Stainless steel quenched lifting shaft
Test Functions	Edge compression, ring compression, adhesion, flat compression, micro compression
Human-Machine Interface	7-inch touchscreen with data processing capabilities
Software	RS-232 computer connection software (optional)
Print Output	Modular integrated thermal printer
Power Supply	AC 220V/50Hz
Unit Conversion	N/Lbf/kgf
Language Display	Dual-language (Chinese/English) touchscreen system
Dimensions	35 x 40 x 65 cm
Weight	approx. 60 kg (actual weight may vary)

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## VI. Scope of Application:

1. Paper bowls: Used to measure the compressive strength of instant noodle bowls of various capacities, disposable paper food containers, and similar products.
2. Disposable paper cups: Suitable for testing the compressive strength of disposable paper cups and bowls.
3. Disposable plastic cups: Suitable for testing the compressive strength of disposable plastic cups.
4. Bubble tea cups: The beverage cup compression strength tester is suitable for testing the compressive strength of packaging cups, bubble tea cups, and similar products.
5. Cartons: Suitable for testing the compressive strength of corrugated cartons, honeycomb cartons, single-wall cartons, and heavy-duty cartons.