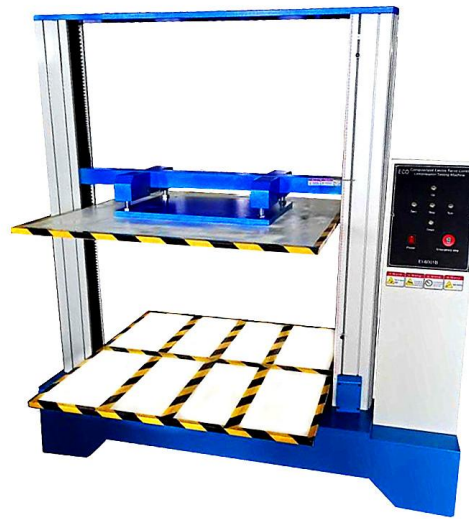


Computerized Servo Control Box Compression Testing Machine



The EI-BCT Computerized Servo Control Box Compression Testing Machine is designed to test the compressive strength of cartons, containers, and other packaging structures. It adopts dynamic holding pressure technology to simulate stacking and compression during warehousing and transportation, enabling accurate assessment of a product packaging's compressive strength and impact resistance under stacking loads.

Equipped with a load cell sensor, the machine transmits data to a computer for real-time analysis, with resistance force displayed directly on the screen. Test results serve as a reliable reference for packaging design optimization.

Main Features

Robust Mechanical Design

The machine features extruded aluminum boards finished with high-grade paint processing. Inside, it incorporates high-precision, low-resistance, gapless double ball screws, improving both transmission efficiency and structural rigidity.

Precision Servo Control System

The control system uses a Panasonic digital communication servo system to drive a high-frequency servo motor, ensuring stable transmission and low noise. Speed accuracy is controlled within $\pm 0.2\%$.

Computerized Operation & Analysis

The micro-system uses a commercial computer as the master controller, equipped with AT test software. Users can set parameters, control working status, perform data collection and analysis, process results, and display or print test reports.

High Reliability & User-Friendly Design

The carton compression tester offers stable and reliable performance with high measurement accuracy. The test software is powerful yet easy to operate and manage.

Testing Standards (Test Methods)

GB/T 4857.4 Packaging – Basic tests for transport packages – Compression test

GB/T 4857.16 Packaging – Basic tests for transport packages – Stacking test using compression tester

ISO 2872 Packaging – Complete, filled transport packages – Compression test

ASTM D642 Standard test method for determining compressive resistance of shipping containers, components, and unit loads

Manufacturing Practices (Instrument Design & Performance)

GB/T 16491 Electronic universal testing machine (Manufacturing specification)

TAPPI-T804 Compression strength of corrugated fiberboard containers (TAPPI standard)

JIS-Z0212 Compression test method for corrugated fiberboard containers (Japanese industrial standard)

Specification:

Model	EI-BCT
Capacity	1,000kg ~ 5,000kg
Units	Kgf, lbf, N, kN, kPa, MPa
Resolution	1/250,000
Accuracy	±1%
Test space	800x800mm, 1000 x 1000mm, 1200 x 1200mm or custom made
Space between platen	800, 1000, 1200mm or custom made
Motor	AC Servo Motor + Driver
Test Speed	1 ~ 200mm/min (standard testing speed 12.7mm/min)
Protector	Leakage protection, overload auto-shutdown, displacement limit protection
Rate Voltage	240V, 50Hz
Dimension	1,500 (W) x 1,200 (D) x 2,100(H)mm
Weight	Approx. 1,000kg

Software Feature:

- a. Function of standard modular: provide users with the necessary applications to the test, covering GB, ASTM, DIN, JIS BS.... And other testing standard specification.
- b. Tested product information: provide users with the data to set about the products, one time to input and re-use permanently for improving the accuracy, the data can be corrected by the formula automatically.
- c. Dual-report editor: provide users with the reported format that users choose (testing program add EXCEL reported format, Extend the previous single pattern of statements)
- d. The data's unit of length and force can be exchanged, unit of force is T, Kg, N, kN, g, lb, unit of length is mm, cm, inch.
- e. Auto-optimization of graphic scale, display the best measurement of graphics. It can test the moving exchange in graphics; it has the load – displacement, load – time, displacement – time, stress – strain load – 2 points extending maps and lots of graph compared.
- f. Test results can be output in Microsoft EXCEL, WORD, & PDF format.
- g. Testing result can be automatically preserved or manual preserved, after the test, it can automatically calculate the most strength, up and down yield strength, loop method, best method, non-proportional extended strength, tensile strength, compressive strength, tensile strength at any point, constant load extension, elastic modulus, rate of elongation, peel range of maximum force, minimum force, average force, total energy, bending modulus, x% load in break displacement, load x% in break displacement and so on. The test data can be stored in any disk.
- h. Software has a capability that can output the before data.

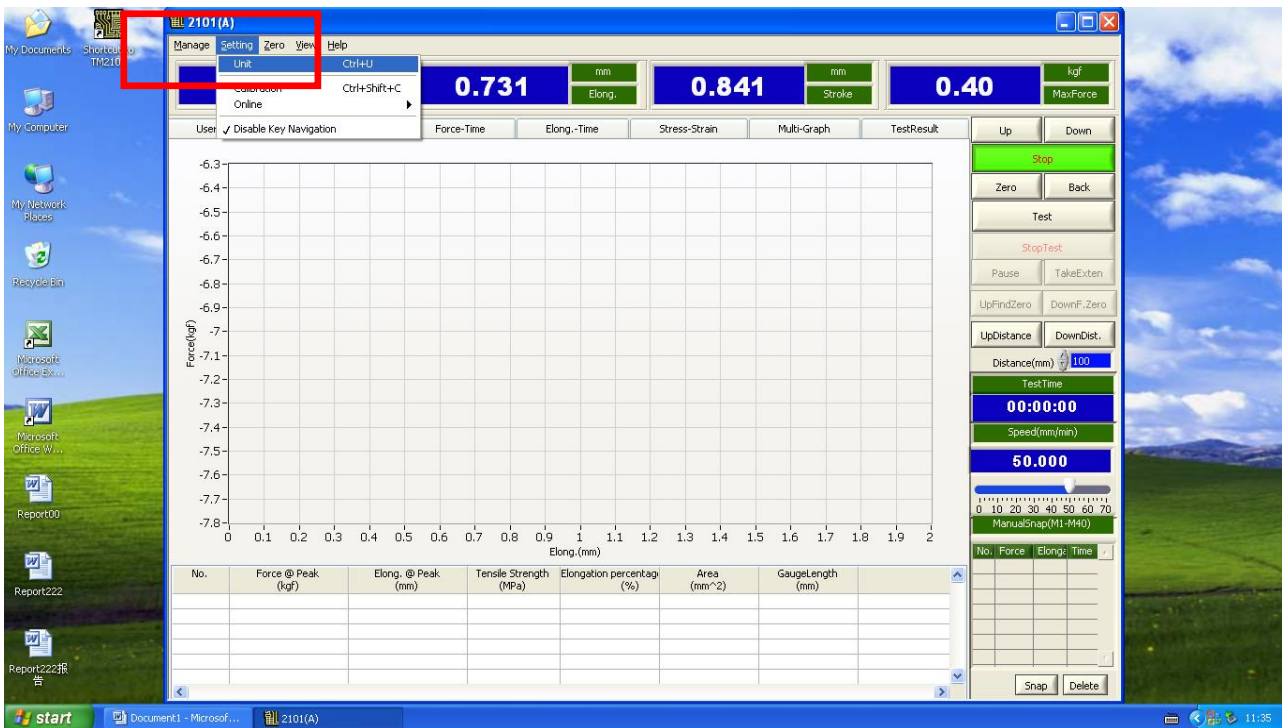
Items can be tested in the Desktop computer type testing machine

Common items: (display data and calculation)

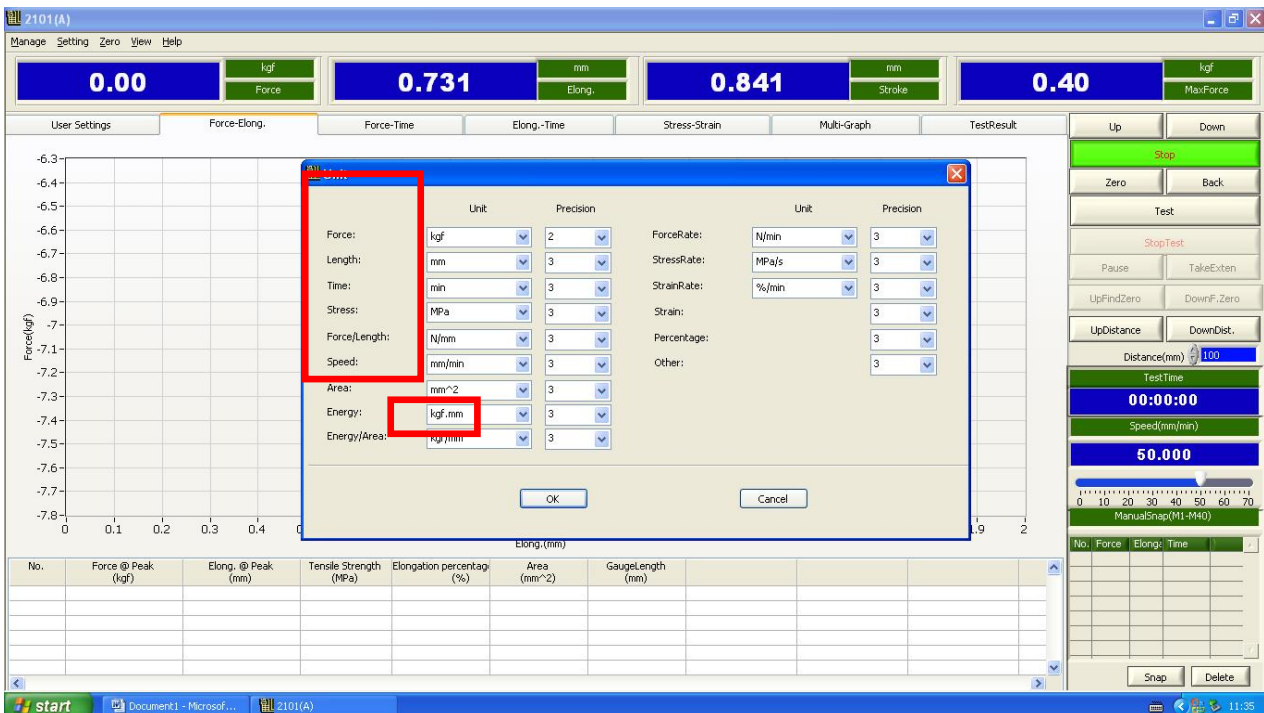
- Tensile stress
- Tensile strength
- Rate of elongation at break
- Fixed stress
- Rate of stress at break
- Stress Strength
- Tear strength
- The value of force at any point
- Rate of elongation at any point
- Pull-out strength
- Force of adhesion and the peak of force

Computer servo control material testing machine software operation interface

1. Choose you need units, setting==>unit



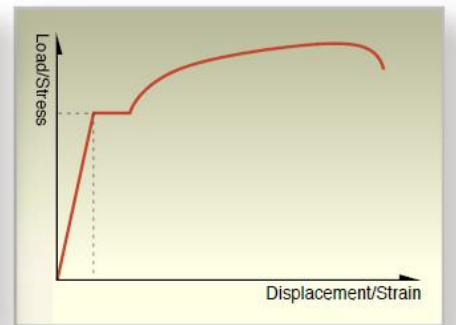
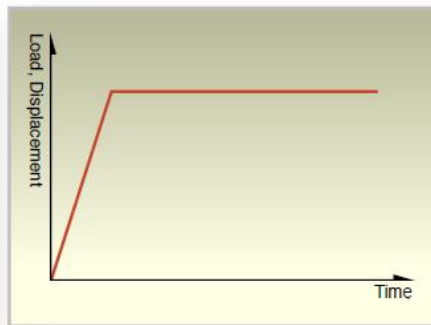
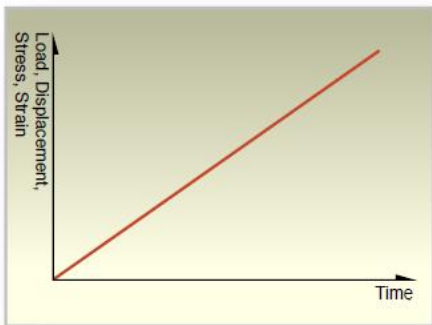
2. There are so many unit, just choose you need.



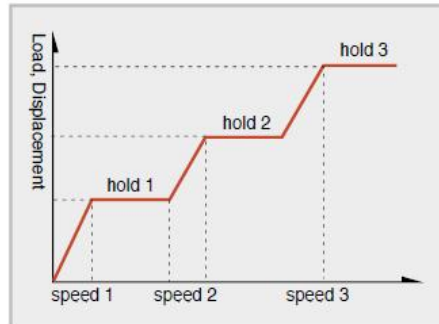
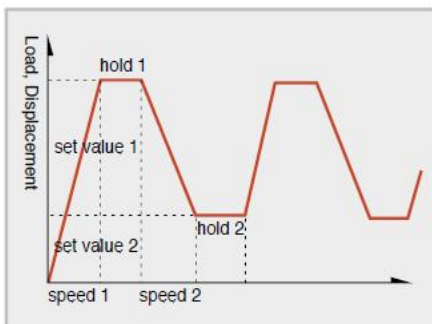
5. Computer servo control material testing machine test curve



STANDARD CONTROL MODES



SPECIAL CONTROL MODES (Optional):

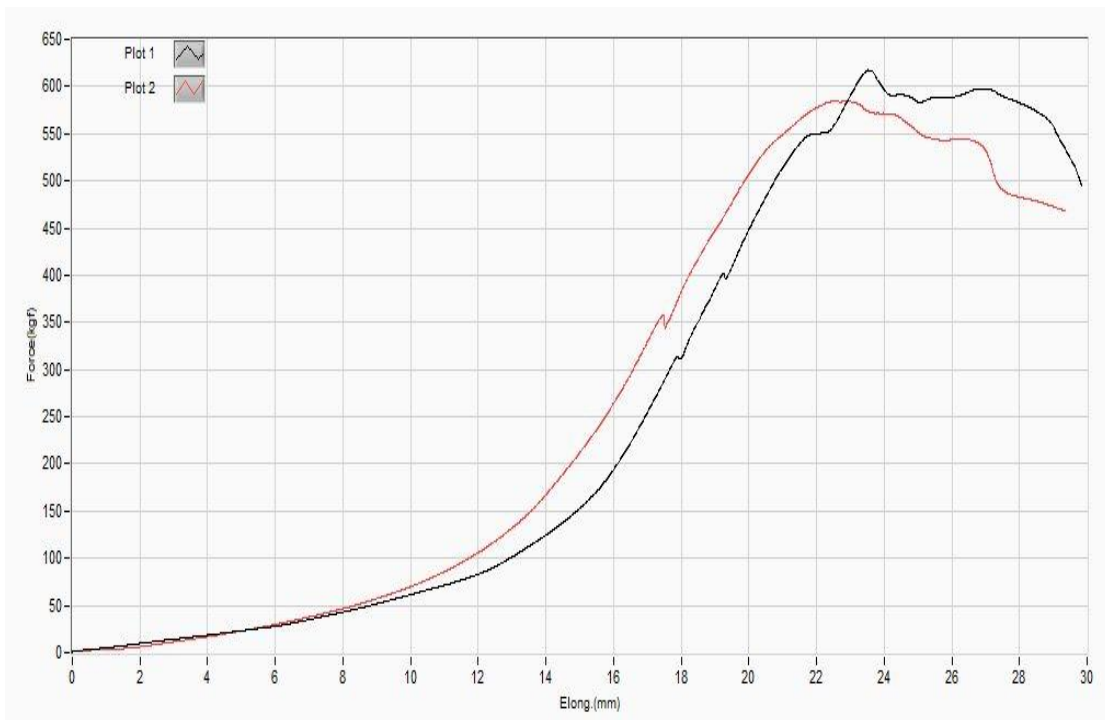


Sample Report:**Eco Instrument**

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Seremban 2, 70300 Seremban. Negeri Sembilan.
Tel: +606-6030 951 Fax: +606-6030 952

Material Testing Report

Customer	xxxxx S/B	Test Date	1/15/2021 12:00:28 PM
Description	Cartoon Box	Lot No.	
Test Speed	12.7 mm/min	Remarks	Comparison Results






No.	Specimen	Max Force (kgf)	Deformation (mm)
1	040	617.42	23.52
2	040R	584.38	22.93
Mean	0.00	600.90	23.23

Tested By:

Approved By:

Standard Main Configuration:

Main unit		1 set
Compression Platen		1 suit
High Precision Performance Beam Type Load Cell		4 units
Japan Panasonic AC Servo Motor and Driver		1 set
Professional Box Compression Software		1 set
Operation Manual		1 book
Branded High performance Computer System OS: Window 11 Professional SSD: 512GB 24" LED Color Monitor Colour Printer		1 set