Compression/Flexure Testing Machine | ETM Type ZY-2

This type of machine is to determine the compression and flexure strength of building materials.

Standards:
GB/T50081-2002, GB/T17671-1999, BS EN196-1,
BS EN 15167-1, ISO 679, ASTM C 109 and C 349

High Quality at affordable price

- **Compression and flexure test can be conducted in one machine**
- Servo motor driven lead screws and heavy duty bearings provides high stiffness with high reliability and stability
- Photoelectrical encoder built in servo motor system is for position measurement of crosshead
- Built-in high precision load cell ensures direct measurement of compression force
- Dual action over-travel limits on all frames provide the highest level of safety and meet all international standards
- DTC-350 controller provides high speed data acquisition with 8-CH A/D converting
- Full one-year warranty on parts and labor
- Free software upgrading

Controlling system – DTC-350

1. Closed loop control of stress, strain and displacement.
   Control loops can switch automatically and smoothly. Control algorithm adopts advanced neural element self-adapting PID. Neural element has ability of close to any non-linear function , simple structure and learning algorithm. It can adapt changing of control object by changing its own synapse weighting and distinguish parameter on line, rebuild object model on line.

2. Control system based on DSP
   DSP, the professional CPU and RISC, is used as control chip of the products. The chip has many functions, such as 40MIPS, 32-digit fixed point, vector control, A/D exchange, position capturing , etc. It is a CPU widely used in industry controlling and suitable to be IC of our products.

3. USB 1.1 communication
   Data exchange between hardware and software via USB 1.1inrerface and velocity of 12Mb/s. USB is main direction of development of communication, which has merits of high communication velocity, variety of communication mode(such as controlling , breaking, batch, real time ,etc.), and will be the main mode of communication.

4. Data acquisition system and position capturing system. Data acquisition system consists of 8 channels of 24 bit A/D exchange; effective resolution is 1/350000 with non-step in full range . Exchange velocity and gain are programmable on line. The products contain 3 channels of encoder position capturing system permitting photo-electric orthogonal code impulse. Frequency can reach 5 MHZ, which has functions of correcting, direction identifying and number-counting.

Two steps to start testing: select a project, press start

This software features a large, growing host of pre-packaged test methods to help you quickly and efficiently meet the requirements of global test standards such as ASTM, ISO, DIN, EN, BS, and more. Selected by an operator at runtime, these methods are crafted to meet the specific test flow, analysis and reporting requirements of industry standards across a range of specimen and test types. Pre-packaged test methods are available in a wide selection of bundled sets, including: Polymers & Plastics, Metals, Construction Materials, Biomedical Products, Paper Products, Adhesives, foam, textiles and more.

➤ Versatile, easy-to-use TestPilot software with a large and growing library of standards-compliant test methods (ASTM, ISO, DIN, EN, BS, and more)

➤ Modular design permits easy upgrading

➤ Plenty of test standards are built in the library of the software for routine tests.

➤ User configured report: user can preset report template and include necessary information, like company information, statistics, and etc. Test report can export to Excel or Word.

➤ Powerful graphic function: real time display curves, like displacement-load, stress-strain, displacement-time, load-times, and others

➤ Powerful analysis function can calculate typical value and display on the curve, like Fm, ReL, ReH, Rp.

➤ Measurement unit: Users can select SI, or others, like N, kN, Kgf, lbf, Mpa, and so on, user can define the unit by themselves using formula.

Specifications:

Name	Compression	Flexure
Maximum force	300kN	5kN
Accuracy	Class 1	Class 0.5
Force range	0.2%~100%FS	0.4%~100%FS
Columns	2	
Distance between columns	300mm	
Force resolution	1/350000 of max force	
Force accuracy	±1% of reading	±0.5% of reading
Force rate range	0.02-5% FS/s	
Distance between platens	240mm	N/A
Upper compression platen	Φ110mm	N/A
Lower compression platen	Φ118mm	N/A
Distance between bending nose and support roller	N/A	100mm
Support span	N/A	100mm
Length of bending nose and support roller	N/A	60mm
Diameter of bending nose and support roller	N/A	Φ10mm
Maximum travel	N/A	100mm
Maximum speed	N/A	50mm/min
Motor power consumption	1.5kW	
Power requirements	380V/50HZ	
Frame dimension	960×850×1560mm	
Weight	1100kg	

Standard configurations:

Name	Description	Quantity
Load frame	Model: ETM305ZY-2 Including driving system	1 set
Servo motor & servo control		1 set
Load cell	300kN for compression 5kN for flexure	1 set
Controller	DTC-350	1 set
Software	Testpilot, English version	1 set
Compression fixture	Upper platen: Φ110mm Lower platen: Φ118mm	1 set for each
Flexure fixture	Diameter of bending nose and support roller: Φ10mm Length of bending nose and support roller: 60mm Span: 100mm	1 pair
Tool kits	Maintenance tool	1 set

Shipping information:

Model	Crated dimension (mm)	Crated weight (kg)
ETM305ZY-2	900 x 950 x 1500	750