TEST MACHINES AUSTRALIA

Model TMA-5 PC controlled Universal Testing Machine

1. Introduction

❖ Used in tensile, compression, bending tests for metals, nonmetals and composites.

❖ Used for test thin sheet, plate, strip, foil sheet, flat bar, wires rod, bars, profiles, tubes, sheet, fibers, elastomer, foams, textiles, food, drugs, cosmetics, rubber, plastic, film, biological materials, etc.

Features

➢ with remote control box to realize speed adjustment of crossbeam, flexibly and freely switched;

➢ with function of automatic return to original position, intelligently, efficiently, quickly;

➢ with limit protection function of any working position and over voltage, over current protection functions, reliable, safe;

➢ with strong test data, which can save, inquire and retrieve test data anytime.

➢ with many control modes of constant speed control to force, stress, deformation, strain, stroke, load, elongation, displacement and low cycle and user self-programming control;

switch among many test curves: stress-strain curve, load-deformation curve, load-displacement curve, load-time curve, deformation-time curve, displacement-time curve, load-strain curve, partial enlargement, overlap and comparison.

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Picture For Reference Only

2. Technical Specification

T_{EST} $M_{ACHINES}$ $A_{USTRALIA}$

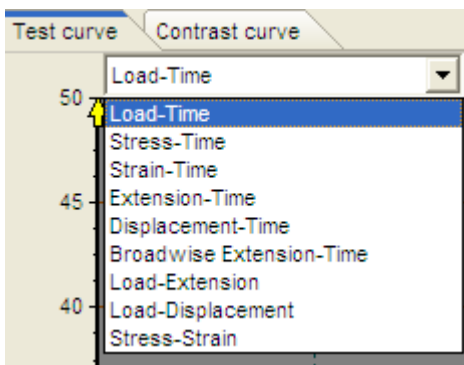| No.	Test Items	Technical Specifications
1	Max. Load capacity	5KN
2	Grade/class	Class 0.5
3	Measuring range of load	0.4%-100%FS
4	Relative error of indication	±0.5%
5	Load resolution	1/±300000FS
6	Measuring range of deformation	0.2%-100%
7	Speed control range of displacement	0.005-500mm/min
8	Speed control accuracy of displacement	Within ±0.2% of the set value
9	Stroke of cross beam	900mm
10	Motor power	400W
11	Control method	Computer control
12	Working voltage	1ph, 240V±50Hz
13	Dimension of loading machine (W*D*H)	540*500*1620mm

Software Introduction

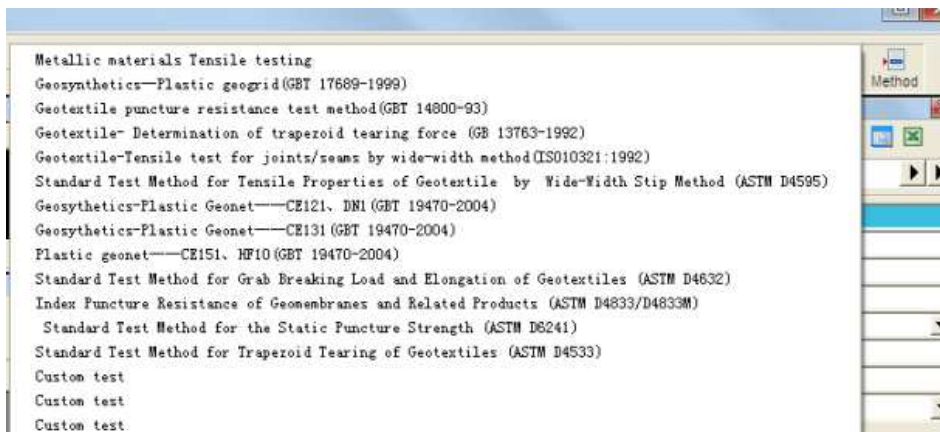1) Simple and attractive test interface, real-time record and display test curve in the real time.
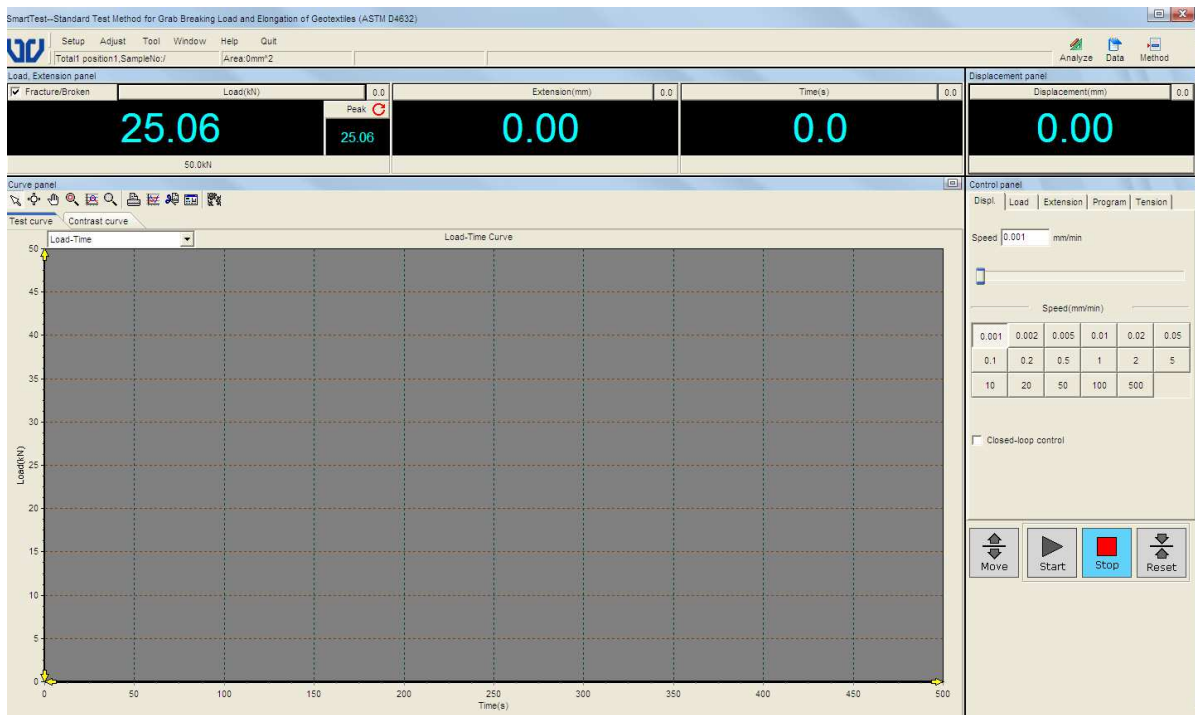
2) Support multiple load cells and extensometers.
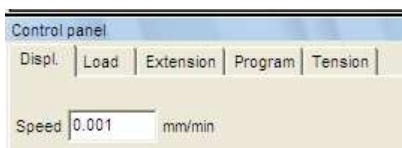
3）The software is Windows 10 capable.

4）Users can select required test curve, such as Load-Time, Stress-Time, Strain-Time, etc.

Test curve | Contrast curve

Load-Time

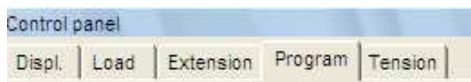| Load-Time |
| Stress-Time |
| Strain-Time |
| Extension-Time |
| Displacement-Time |
| Broadwise Extension-Time |
| Load-Extension |
| Load-Displacement |
| Stress-Strain |

3) The software fully compliance with the corresponding international standards like ISO,

ASTM and BS EN etc. and also we can program your test standards into our software.

Metallic materials Tensile testing
Geosynthetics—Plastic geogrid (GBT 17689-1999)
Geotextile puncture resistance test method (GBT 14800-93)
Geotextile- Determination of trapezoid tearing force (GB 13763-1992)
Geotextile-Tensile test for joints/seams by wide-width method (ISO10321:1992)
Standard Test Method for Tensile Properties of Geotextile by Wide-Width Stip Method (ASTM D4595)
Geosythetics-Plastic Geonet——CE121、DN1 (GBT 19470-2004)
Geosythetics-Plastic Geonet——CE131 (GBT 19470-2004)
Plastic geonet——CE151、HF10 (GBT 19470-2004)
Standard Test Method for Grab Breaking Load and Elongation of Geotextiles (ASTM D4632)
Index Puncture Resistance of Geomembranes and Related Products (ASTM D4833/D4833M)
 Standard Test Method for the Static Puncture Strength (ASTM D6241)
Standard Test Method for Trapezoid Tearing of Geotextiles (ASTM D4533)
Custom test
Custom text
Custom test

Method

7) with different control mode and closed-loop control is feasible.

Control panel

Displ. | Load | Extension | Program | Tension

Speed 0.001   mm/min

8) Users can program test procedure as his own requirements

Control panel

Displ. | Load | Extension | Program | Tension

9) Users also can edit test report by adding or delete items as his own requirements
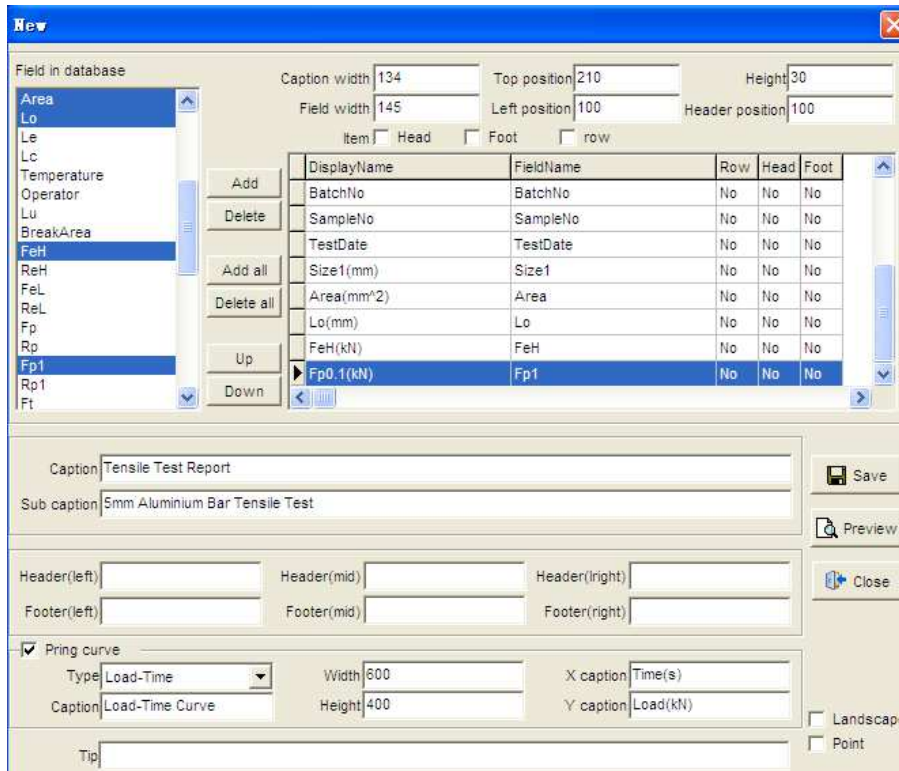
10) User can quickly inquire previous test data by using data inquiry module
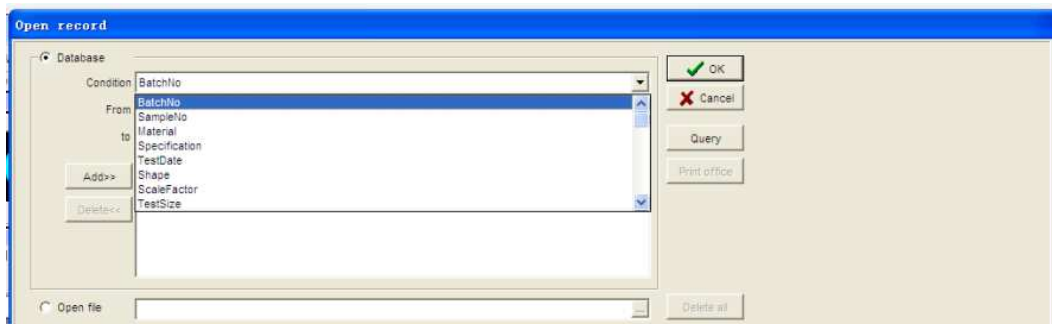
11) User can select test report template: single, batch or office.

12) Batch reports can be displayed in one paper and also can be output in PDF or HTML format.

12) The software automatically figure-out routine data such as tensile strength, yield strength, modulus of elasticity, extend rate after rupture, non-proportional extend strength etc.

3. Main Configuration

No.	Content	Qty.

1	Load frame
	  Aluminum alloy cover with streamline design
	  High intensity testing machine structure and cross head, high stiffness to assure accuracy
	  Precise ball bearing screws
		1 set

2	Precise servo speed adjusting motor and driver	1set
3	Precise load cells (Homemade) 5kN	1 pc. 1pc.
4	Hand-held controller	1pc.
5	Self-tightening tensile grips for PVC	1set
6	Compression test fixture	1set
7	Cutting anvil	1set
8	Lenovo Computer	1set
9	Original Win10 English operation system	1set
10	Control software Smarttest control test software	1 pc.
11	Attached tools	1set
12	Technical documents User manual, component lists, certificate	1pc.

Optional Item

800mm Long stroke extensometer :

- Used for determination of elongation for film, rubber, pvc, etc.

- Suitable for both single column and two column testing machines.

- Measuring range: 10-800mm

- TMA design and manufacture