Computer   Control Electronic   Universal Testing Machine

TMA-100 M

1.Brief Information

Model TMA-100M Computer control electronic universal testing machine is designed and manufactured according to ASTM, ISO,DIN etc standards. It is computer-controlled precision testing machine, suitable for wide range of material for tension compression, bending and shearing test. It has high stability as well as high precision, equipped with PC system& printer for graph, test result display, test control as set program, printing & data processing. Complete with modulus for metal, spring, textile, rubber, plastic and other material testing & creep test. It is widely used in many field used in many fields such as industry factories, mineral enterprise and high schools.

2.Standard :

●ISO527-6892:Metallic Materials-Tensile Testing At Ambient Temperature
●ISO 14125-Fiber Reinforced plastic composites -deformation of flexural properties
●ASTM A 370:Standard Test Methods And Definitions For Mechanical Testing Of Steel Products Tension Test
●ASTM 1060 And So on

3.Features:

3.1 Host Frame
●The mainframe is a double-space door structure. The driving principle is that the motor drives the ball screw pair to rotate after decelerating through the reducer system, thus driving the middle beam up and down to complete the test, the transmission is stable and the noise is low.
●Using four guiding optical screws, φ 40mm high precision ball screw. The high rigid frame is composed of thick beam and base, which can guarantee the frame with excellent longitudinal and transverse rigidity and good overall accuracy.
●Servo motor drive and reducer system without maintenance, can guarantee the accuracy and stability of the beam ,the speed ratio can reach 1: 100000.
●Under the guidance of the internal control precision of 5% of coaxially, the cross joint can be precisely aligned in axial test, and the linear motion of the beam can be guaranteed, so as to ensure that the influence of the lateral force on the specimen under load is minimal. Thus, better test performance can be obtained.

3.2 Controller
●Force , displacement , deformation measurement resolution up to 1 / 300000 of full scale
●AD sampling frequency can be as high as 300 Hz
●Can realize closed-loop control of parameters such as test force, specimen deformation and beam displacement .It can be used to realize the tests of constant speed- test force, constant speed- displacement, constant speed- strain, constant speed-load cycle, constant speed-deformation cycle and so on. Various control modes can be switched smoothly. And smooth transition. Advanced Neuron Adaptive PID Control algorithm.

4.1.Technical specification:

Mode	TMA-100M
max. test force	100KN(10.000 kg)
Test force testing range	1%~100%
Testing machine accuracy grade	0.5
Accuracy of test force	Better than indication value ±0.5%
Crosshead displacement resolution	0.001mm
Large deformation resolution	1/200000
Control system	servo drive controller
Auto-stop function	1.maximum capacity overload protection 2.leakage current protection
Adjust speed range	0.005-500mm/min
Tensile test space	700mm
Compression test space	**1100mm**
Compression Diameter	100*100mm
Effective test width	**475mm**
Host type	door structure

Host dimension	840mm x 600mm x 2050mm
Weight	600kg
Power Supply	240volts, Single phase, 50 hertz
Working environment	Room temperature 45 humidity 20%-80%

4.2 Standard delivery:

| NO.		Brand Name	
1	Test host		1
2	AC servo motor		1
3	Speed governor		1
4	Load cell		1
5	Precision ball screw	Taiwan ABBA	2
6	Deceleration system		1
7	Computer control system		1
8	Optical encoder		1
9	Computer	Lenovo	1
10	Printer	Hp color ink jet printer	1
11	PCI Card		1
12	Windows system software		1
13	Tensile accessory For Metal Material	Round jaw(mm)Φ4-Φ9, Φ9-Φ14, Φ14-Φ20 Flat jaw 0-7,7-14,14-20	In total 6 sets customer choose by yourself
14	Compression accessory	100*100mm	1
15	Bending Fixture		1
15	Technical information		1

5.Max Test Software Interface
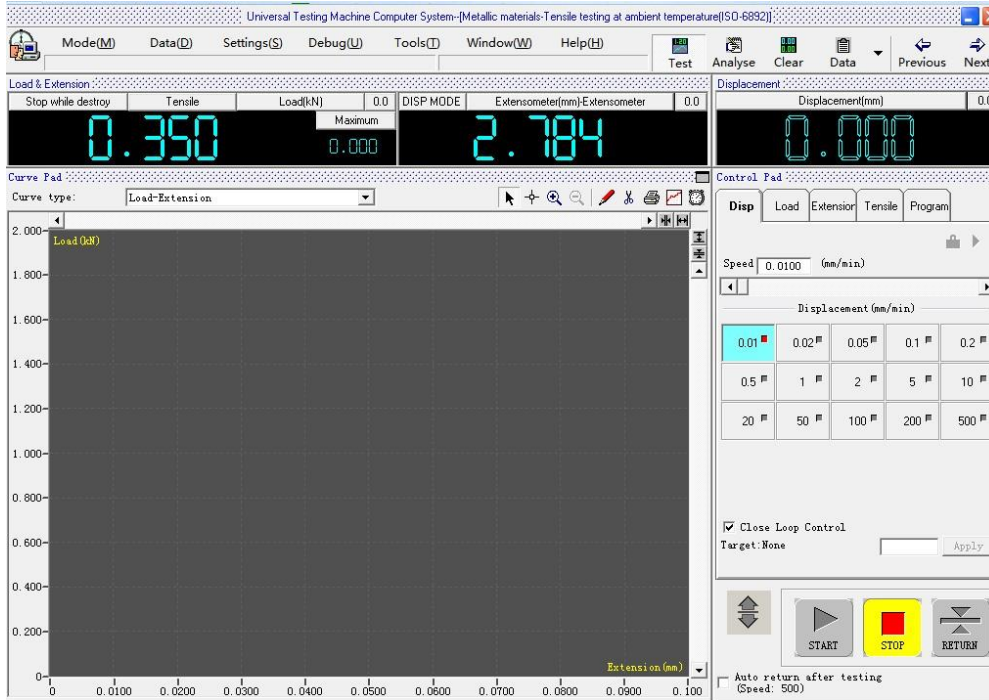
5.1.Test Interface
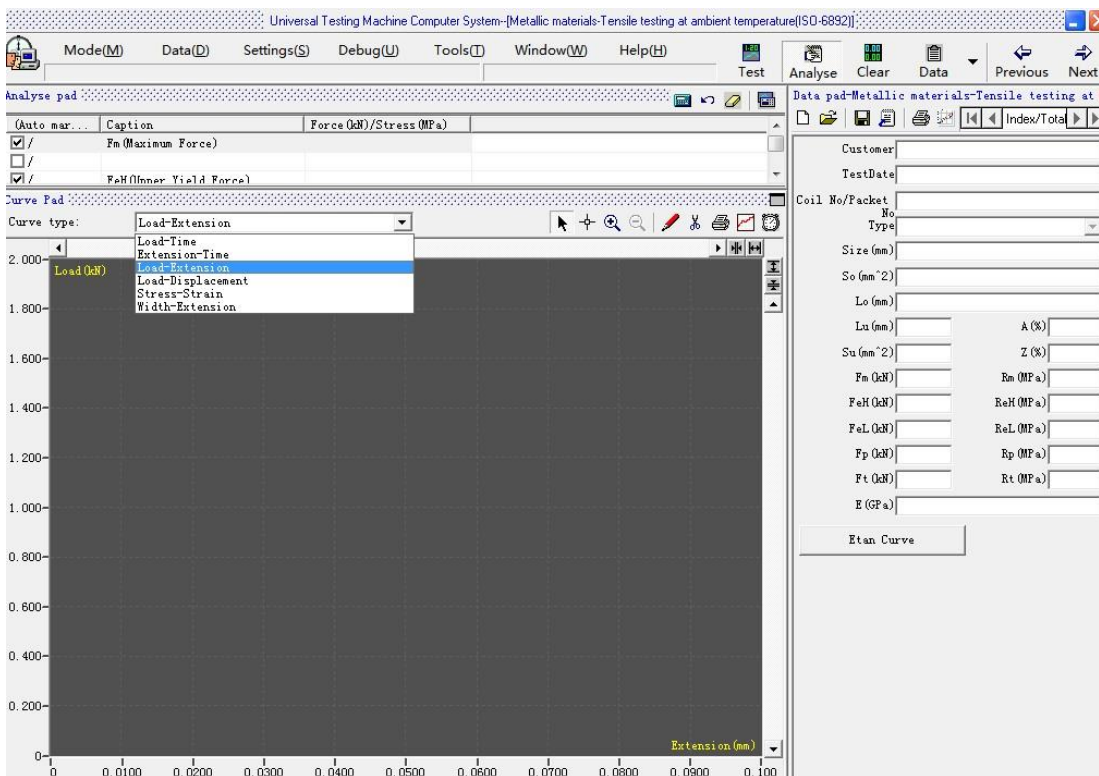
5.2.Test Standard
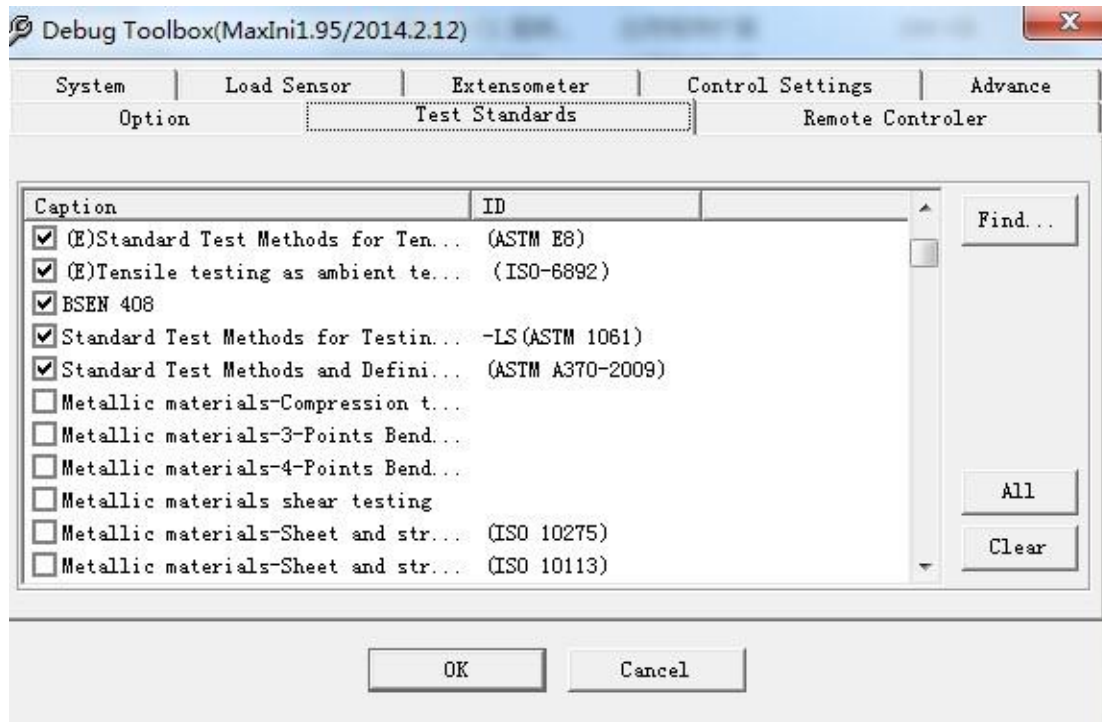
6.Max Test Software features

6.1 Language selection: English and other languages interface freely switch operation,

6.2 Basic functions: calculate and list data graphics: the basic parameters of a material testing machine: (1).yield point(2).0.2% off set.(3). Yield strength(4). Tensile strength(5). Elongation(6). Energy absorption(7). Maximum(8). Rupture values(9). Deformation amount (10). Averages. More than twenty parameters contrast to graphics.

6.3 Multiple curve display mode: Stress - strain, Force - displacement, Force - time, Strength –Time and other curve patterns.

6.4 Control mode: fixed displacement, fixed speed, constant strain rate, fixed load, fixed load rate, fixed strain rate, etc.

6.5 Dynamic display: During the test, the load, elongation, displacement and experimental curves selected as testing, real-time dynamic display on the main screen.

6.6 Automatic identification ,storage: test conditions, test results, regression

6.7 Graphical Analysis: After the test is completed, you can use the mouse to view data from the test curve, any point on the test curve can be enlarged analysis, and choose Print.

6.8 Report Output: Graphics and arguments are opened to customers and can be modified as required. It can output different report formats, convenient and easy to learn practical

9.Some Pictures for your reference

Grips For Metal Material

Round jaw(mm):Φ4-Φ9, Φ9-Φ14, Φ14-Φ20
Flatjaw:0-7,7-14,14-20

Wire connection with ground wire Panel   **Power Switch**   **Hand**

For further information please contact:

TEST
MACHINES
AUSTRALIA

0418 369 505
sales@testmachines.com.au
www.testmachines.com.au