

Computer Control Electronic Universal Testing Machine

TMA-WDW 10



## 1. Brief Information

Model TMA-WDW-10 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. Features:

### 2.1 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, 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.

**2.2 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.

**3.3 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.
- Rubber, vulcanized or thermoplastic - Determination of tear strength - Part 1

**3. Technical Specification**

**3.1. Technical specification:**

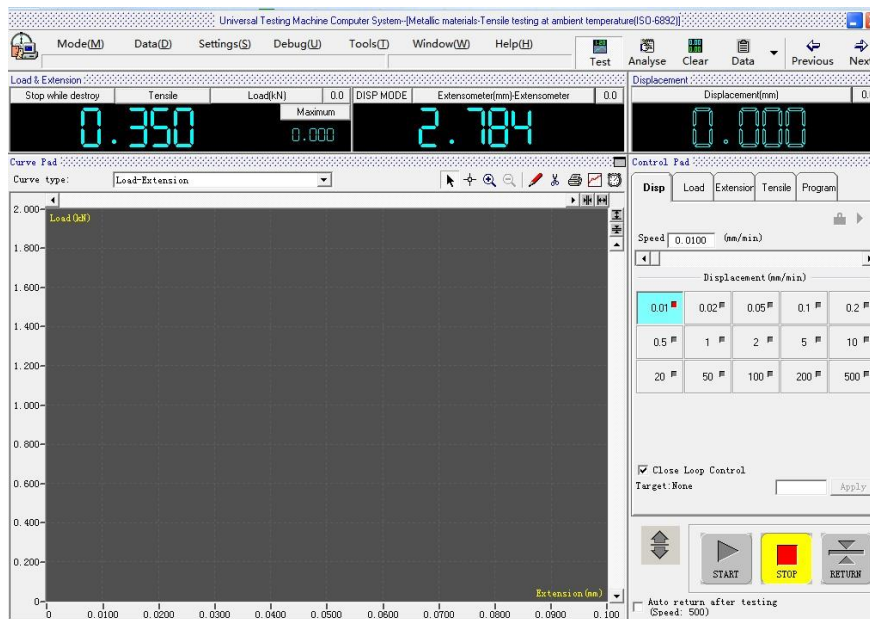
Mode	WDW-10
Max. test force	10KN
Measurement range of test force	2%-100%
Accuracy of test force	±0.5 %
Deformation Measuring Range	2%-100%
Adjust speed range	0.01-500mm/min
Max Tensile Travel	650mm(Can customized )
Max Compression Travel	800mm (Can customized )
Max Travel Of Crosshead	900mm (Can customized )
Effective width	400mm (Can customized )
Power supply	220volts, 1 phase, 50hertz
Motor Power	0.75kw
Host type	door structure
Host dimension	600mm x 420mm x 1700mm

Weight	500kg
Working environment	Room temperature 45 humidity 20%-80%

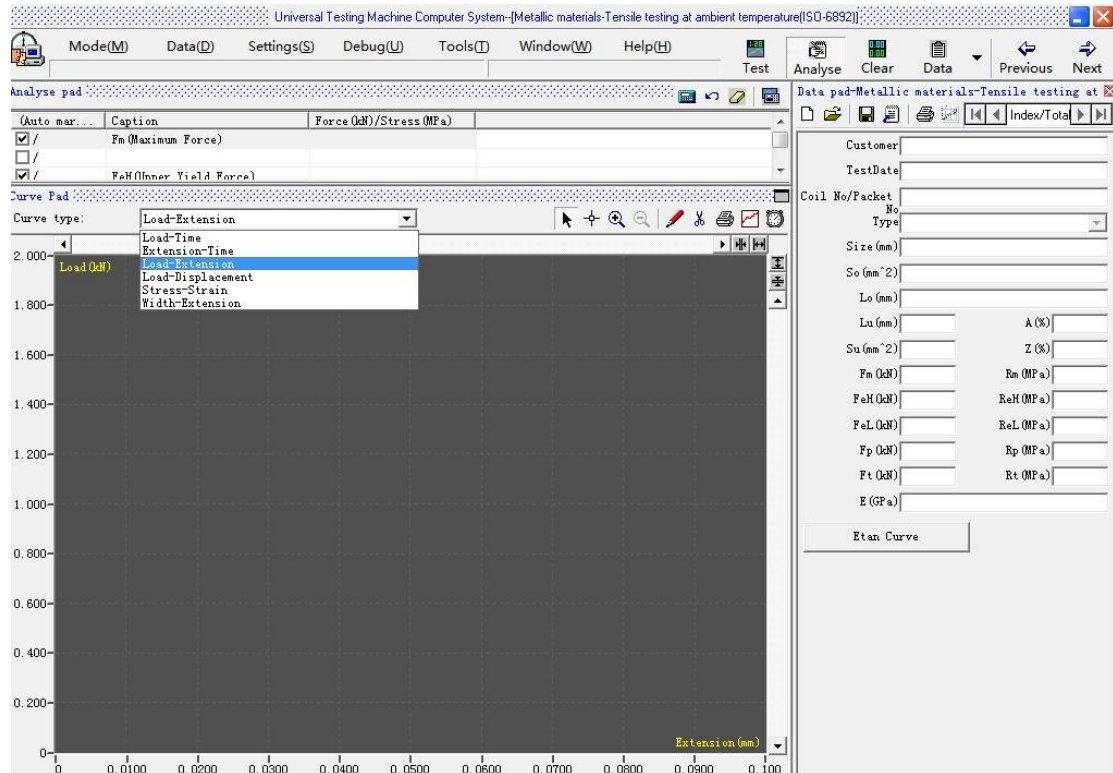
### 3.2 Standard delivery:

NO		Brand Name	
1	Test host		1
2	AC servo motor		1
3	Speed governor		1
4	Load cell	Domestic Famous Brand( 10 kn)	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	Specific tools		1
14	Tensile accessory	Round jaw(mm): Φ4-Φ9, Φ9-Φ14, Φ14-Φ21 Flat jaw 0-7,7-14,14-20	<b>In total 3 sets</b>
15	Compression accessory	φ100mm optional	1
16	Technical information		1

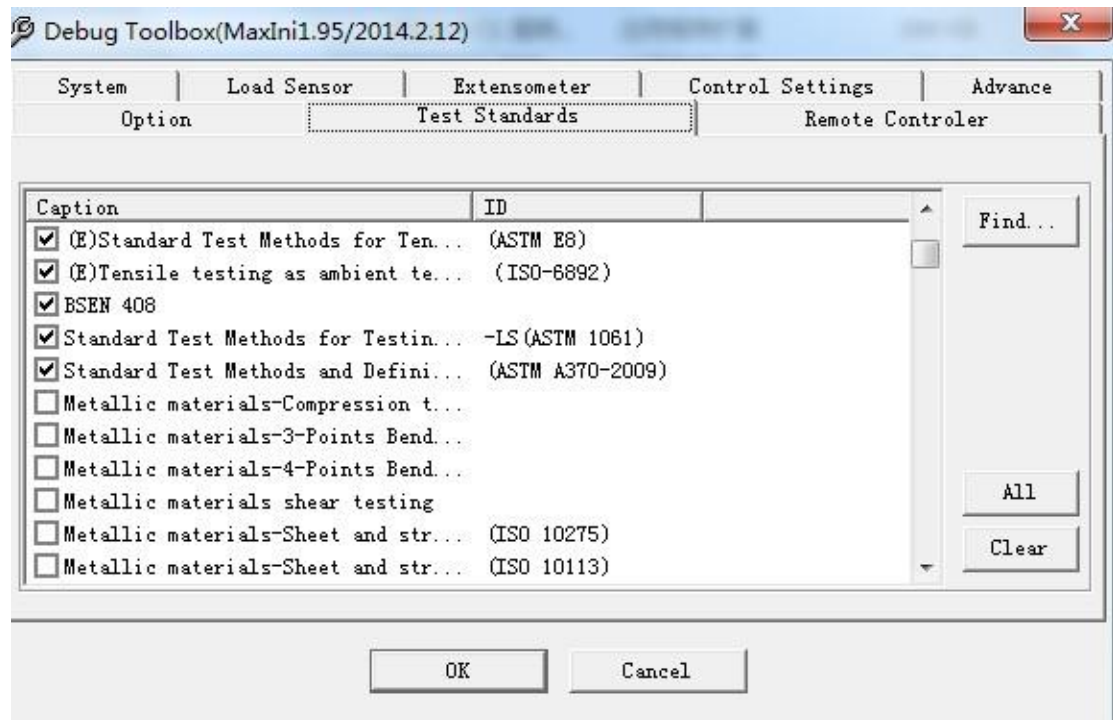
### 4.Max Test Software Interface



## 4.1. Test Interface



## 4.2. Test Standard



## 5. Max Test Software features

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

5.2 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.

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

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

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

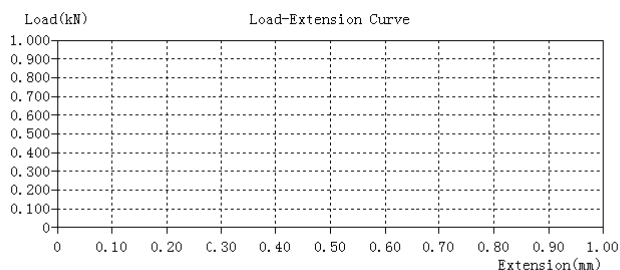
5.6 Automatic identification ,storage: test conditions, test results, regression

5.7 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.

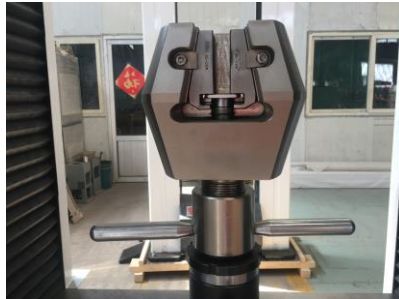
5.8 Report Output: Graphics and arguments are opened to customers and can be modified as required. It can output different report formats, convenient and easy to learn practical

Tensile Test

Customer		TestDate	
Coil No/Package No		Type	
Size (mm)		So (mm <sup>2</sup> )	
Lo (mm)		Lu (mm)	
A (%)		Su (mm <sup>2</sup> )	
Z (%)		Fm (kN)	
Fm (MPa)		FeH (kN)	
FeH (MPa)		FeL (kN)	
FeL (MPa)		Fp (kN)	
Fp (MPa)		Ft (kN)	
Ft (MPa)		E (GPa)	



**6. Some Pictures for your reference**



**Grips For Sample Material**



**Round jaw(mm)Φ4-Φ9,  
Φ9-Φ14, Φ14-Φ20**



**Flatjaw0-7,7-14,14-20**



**Wire connection with ground wire**



**Power Switch**



**Hand Panel**

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