

Model WDW-100E Computer Control Electromechanical Universal Testing Machine



Applications & Characters:

WDW-100E Computer Control Electromechanical Universal Testing Machine is designed and manufactured according to ASTM, ISO, DIN, GB etc standards. It is computer-controlled precision Testing Machine, suitable for wide range of material for tension, compression, flexural and shearing and hardness test. It has high stability as well as high precision, equipped with PC system & printer for graph, test result display, printing & data processing. Complete with modulus for metal, spring, textile, rubber, plastic, wood and other material testing. It is widely used in many fields of such as industry factories, research & development, test institutes and training centers etc.

Applied Standards:

Load meets or exceeds the following standards: ASTM E4, ISO7500-1, EN 10002-2, BS1610, DIN 51221.
Strain measurement meets or exceeds the following standards: ASTM E83, ISO 9513, BS3846 and EN 10002-4

Load Frame:

The purpose of design with table type load frame & double columns is to ensure safety, reduce operator

fatigue, and provide the highest level of flexibility. Concretely, it features as following:

High accuracy:

The preloaded precision ball-screw ensures high speed and position measurement accuracy. A built-in scale on the frame indicated the crosshead position for verification of normal strain testing.

Safety features:

Mount with the upper and lower limit switches, the testing machine stops automatically when the change in the test force exceeds a specified value during operations.

Large space in the working area:

The insides of columns provide wide space for the operator.

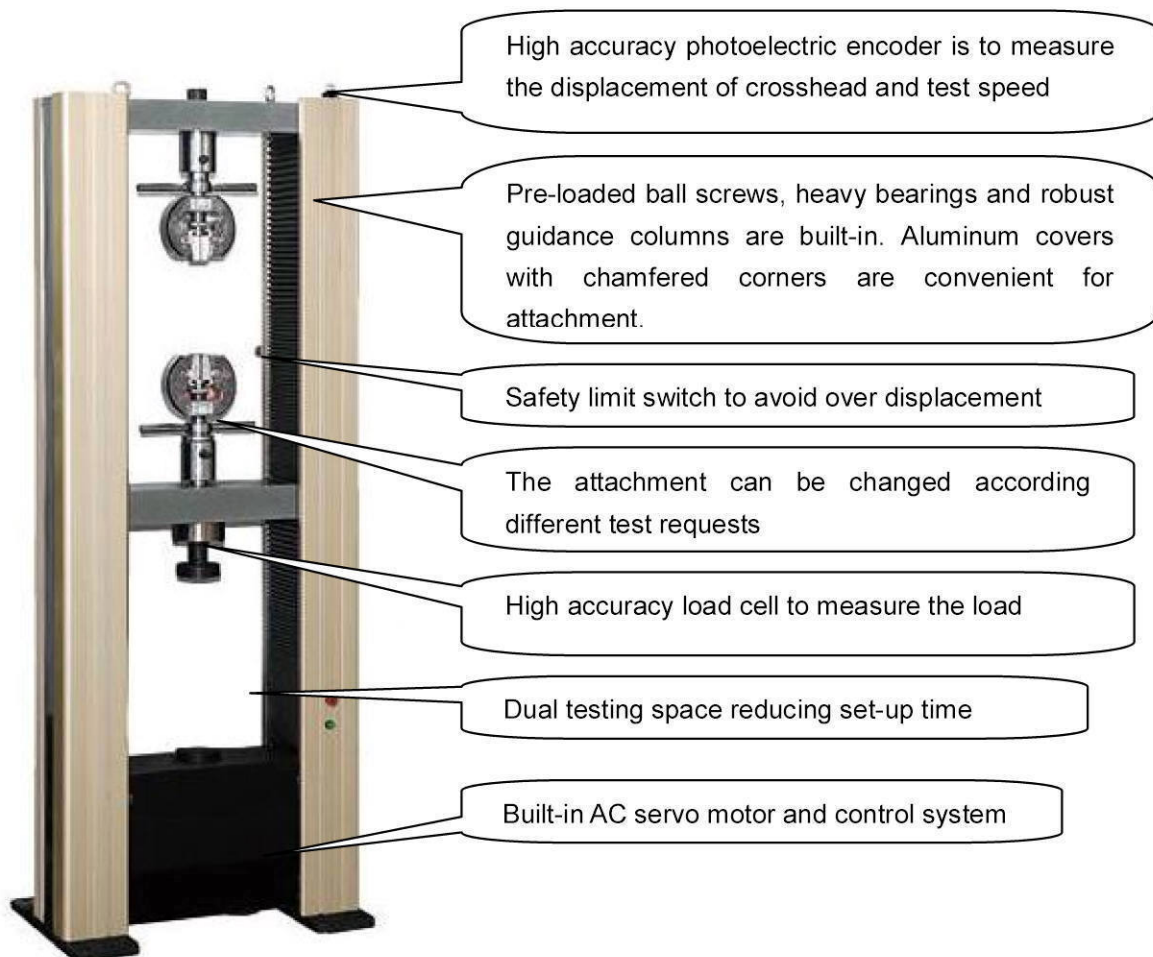
Over-stroke limiter:

The range of the crosshead movement mechanically limited.

Comfortable working area:

The wide legroom under the load unit provides a comfortable working area for attaching and removing jigs.

Load Frame:



Main Specification

- Load capacity: 100kN
- Load accuracy: $\leq \pm 0.5\%$
- Deformation accuracy: $\leq \pm 0.5\%$
- Displacement resolution: 0.001mm
- Speed range: 0.01-500mm/min
- Effective test space: 700 mm
- Total Cross Travel: 1200mm
- Space between columns: 400mm
- Twin ball screw driven with close-loop and servo motor control.
- Power supply: 220V, Single phase, 50Hz, 1kW
- Outline dimension: 700x580x1850mm
- Weight: 600kg

Standard Accessories:

- Wedge action tensile fixtures: 100kN capacity
Inserts for round specimen: $\Phi 4 \sim 7\text{mm}$, $\Phi 7 \sim 14\text{mm}$, $\Phi 14 \sim 20\text{mm}$ 1 set for each
Inserts for flat specimen: thick: $0 \sim 7\text{mm}$, $7 \sim 14\text{mm}$, $14 \sim 21\text{mm}$; width: 50mm 1 set for each



- Compression platen with 100kN capacity: 1 set
Platen dia. 100mm



- 3 points Flexural test fixture: 1 set
Upper punching head: $\Phi 20\text{mm}$; maximum span between support: 20-400mm



- Photoelectric encoder with resolution of 0.001mm:

1 pc



- Load cell:
Flat load cell +/-100kN, Tensile & Compression type

1pc



- Clip-on Extensometer:
Gauge length: 50mm; Travel: 10mm.

1 set



- Computer & software
Computer: Dell + 19" flat monitor
Software: **English & Russian Version** (For details, please refer **Annex-1**)

1 set



- Servo Control system

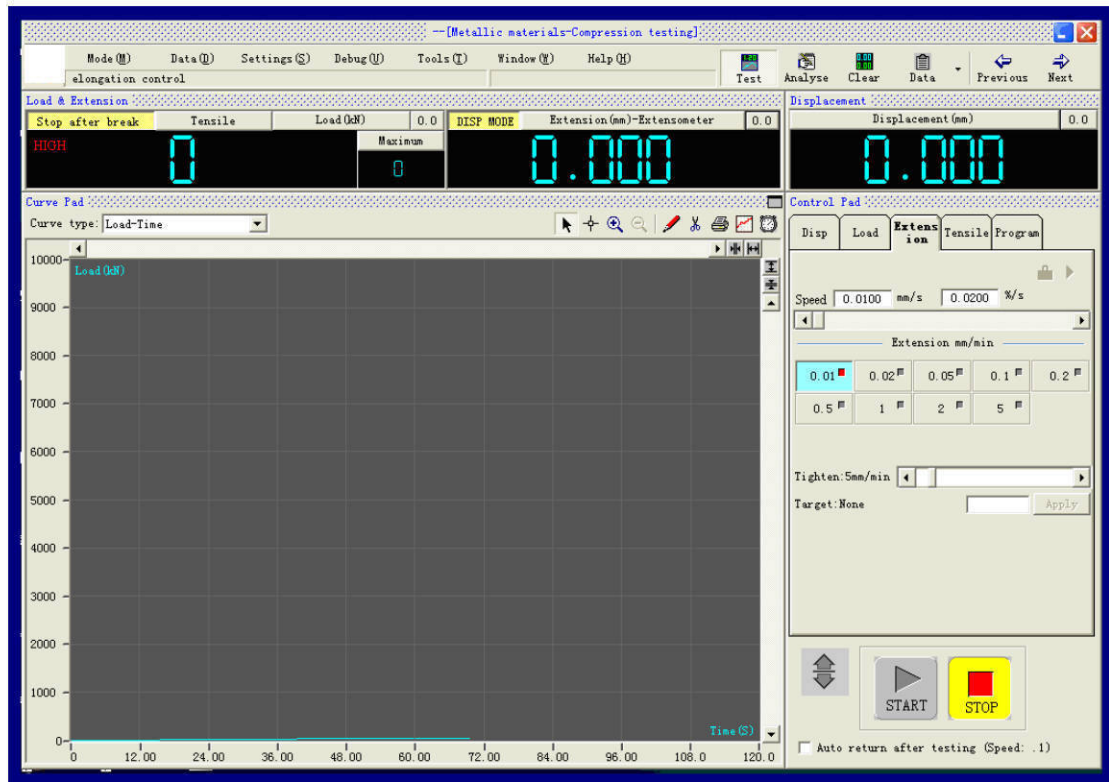
1 set



Annex-1 Introduction of the software:

Features of Measuring & Control software

TE software refers to the software characteristics of the top manufacturers of testing machine in the world and proposals of various testing requirements from the end users, and combines all the advantages of former versions of software with lots of new features. Optimized software structure makes the testing operation easy, convenient and powerful. Main interface as following,



Features:

1. Full digital control

The whole measuring and control system adopts the special controller, which can achieve the digital adjustment of zero point and gain of load, deformation and displacement, and it's easy to operate and possesses the high reliability.

2. Possess the functions of storage, setting and loading for various kinds of parameters, which make it convenient to connect multiple transducers with one load frame.

3. Realize the close-loop control, and show the reference curve during the executive operator adjusting the close-loop parameters, so the user can observe the close-loop effect caused by the parameters.

4. Perfect intelligent expert system of control mode to offer the automatic programming function. The user can set control mode during the test or each step of the test as the regulation according to the user's actual needs to compile the program, which can meet the test requests of various kinds of materials and test standards at home and abroad.

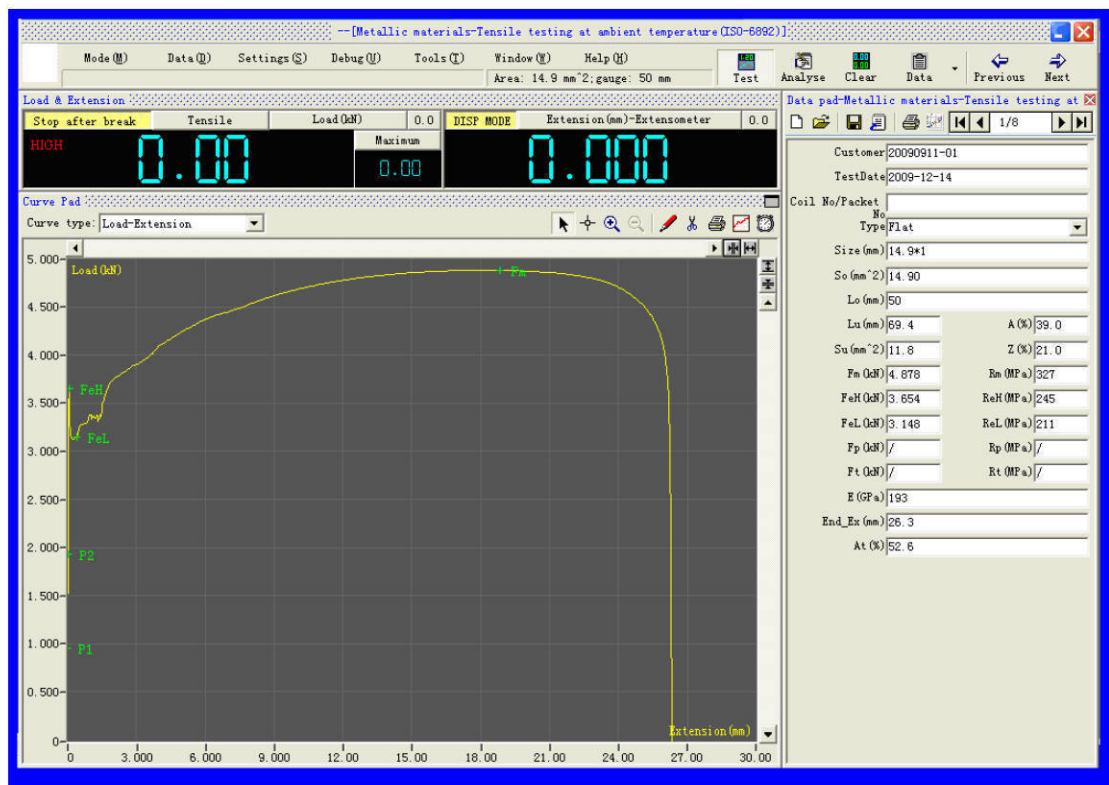
5. Perfect graphic function to complete the functions of the reappearance, amplification, reduction, self-adaptation, lapping of the curves, display and print the curve at the appointed range, observe the coordinate of the test point.

6. Data processing supports automatic analysis and graphic man-machine mutual processing, which is convenient to check and compare the test results.

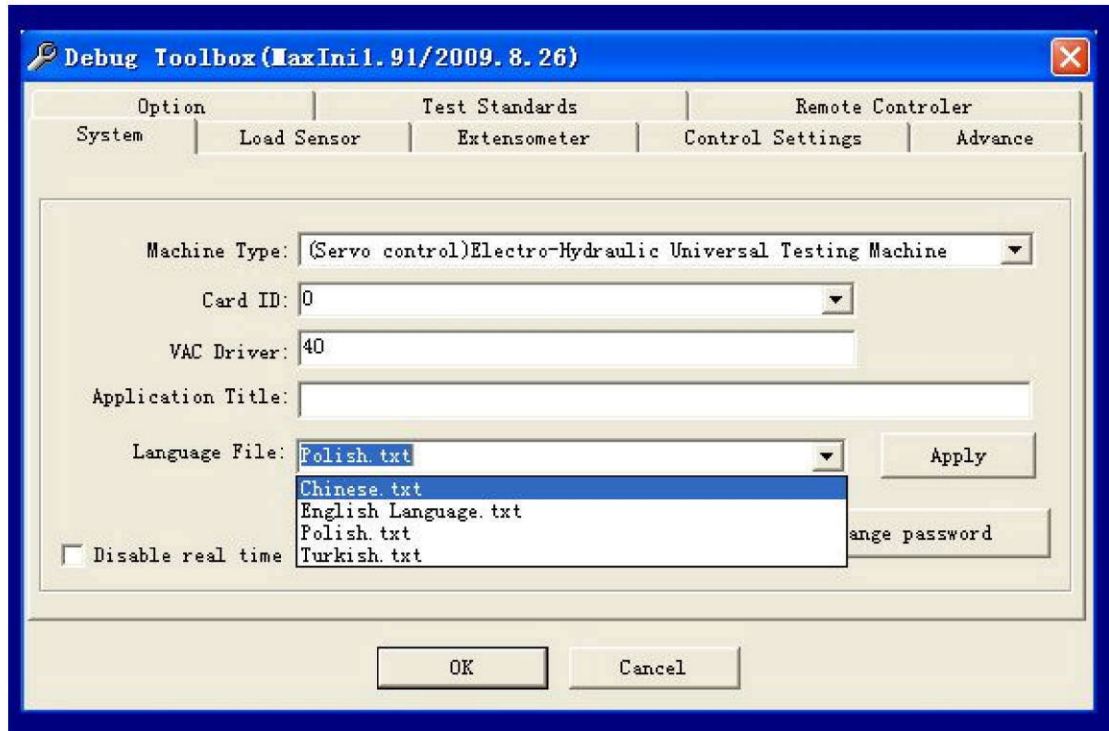
7. The user can self-define the output of the test reports, which has the utmost flexibility.

8. Perform the automatic inspection of the operation system,; real-time acquisition and control under the platform of Win2000、WinXP, etc. NT mode; accurate timing and high-speed sampling;
9. Multilevel identity management integrates the flexible function of the testing machine with easy operation, which not only makes the operation easy by ordinary operator but also protect the system effectively.
10. Framework type design concept and open type program structure make it easy to extend the function of the machine and further exploitation for the user. It can also connect externally internet program module to complete the requests of data connecting internet.
11. Based on the database, test data is stored by form of text file, which is convenient for the user to inquire about and utilize the various kinds of commercial report forms to reprocess the test data, meanwhile transfer the data to the internet conveniently.
12. Multilevel identity management
Multilevel identity management, different identity has different functions, which not only makes the operation quick by ordinary operator, but also protect the system effectively.

Please see more information with some pictures:



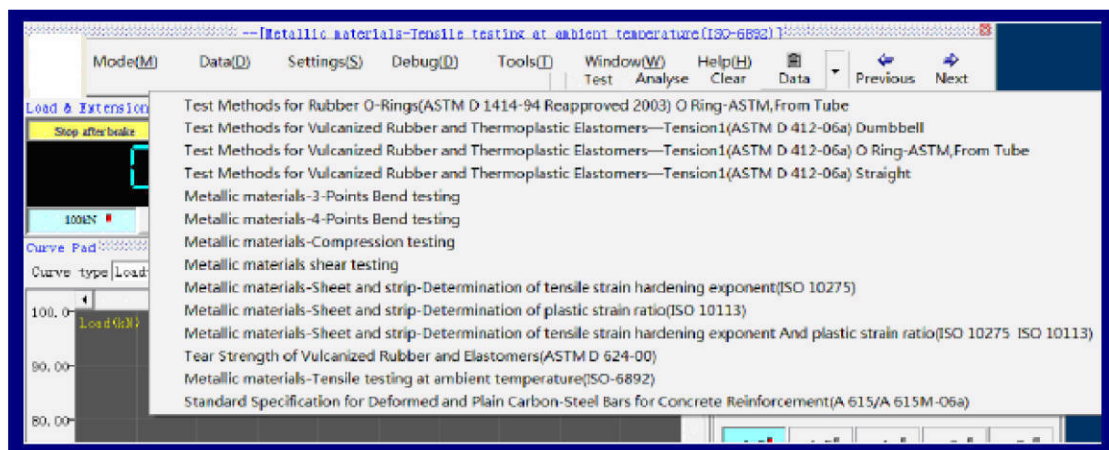
The control modes, test data and curves can be displayed in real time in the main interface and can be shifted at any time.



The deep-seated parameters of software are contained in Debug Toolbox

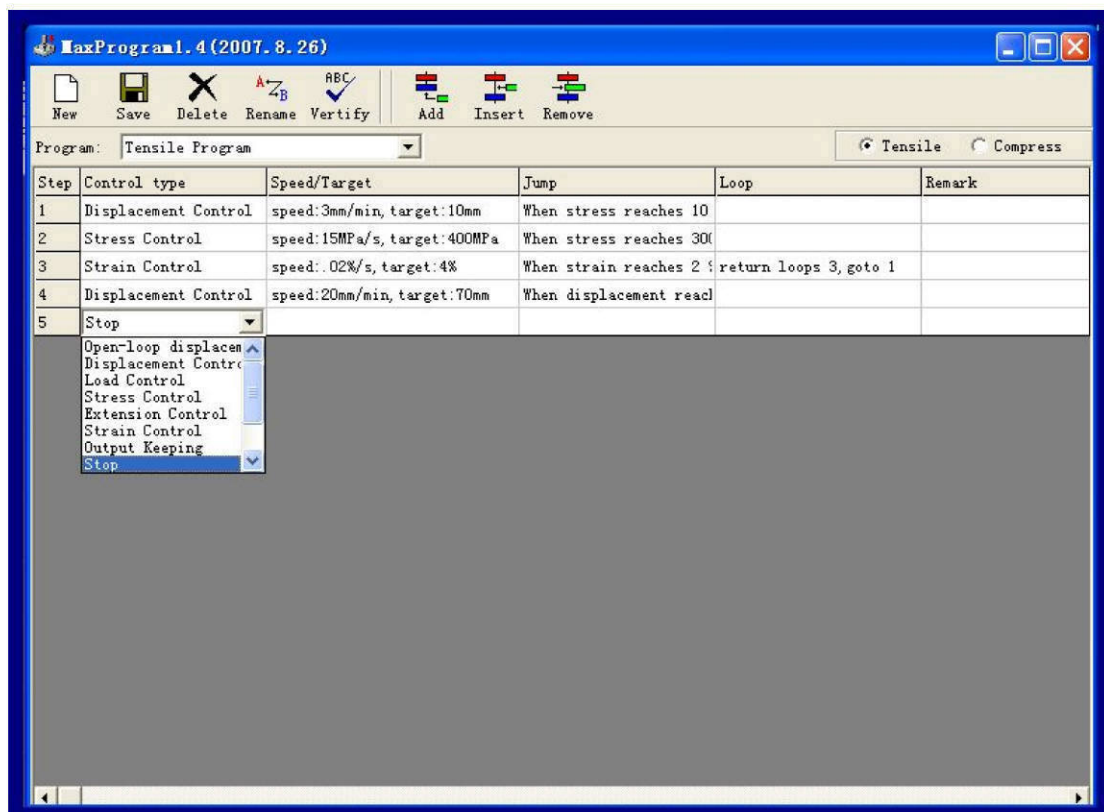
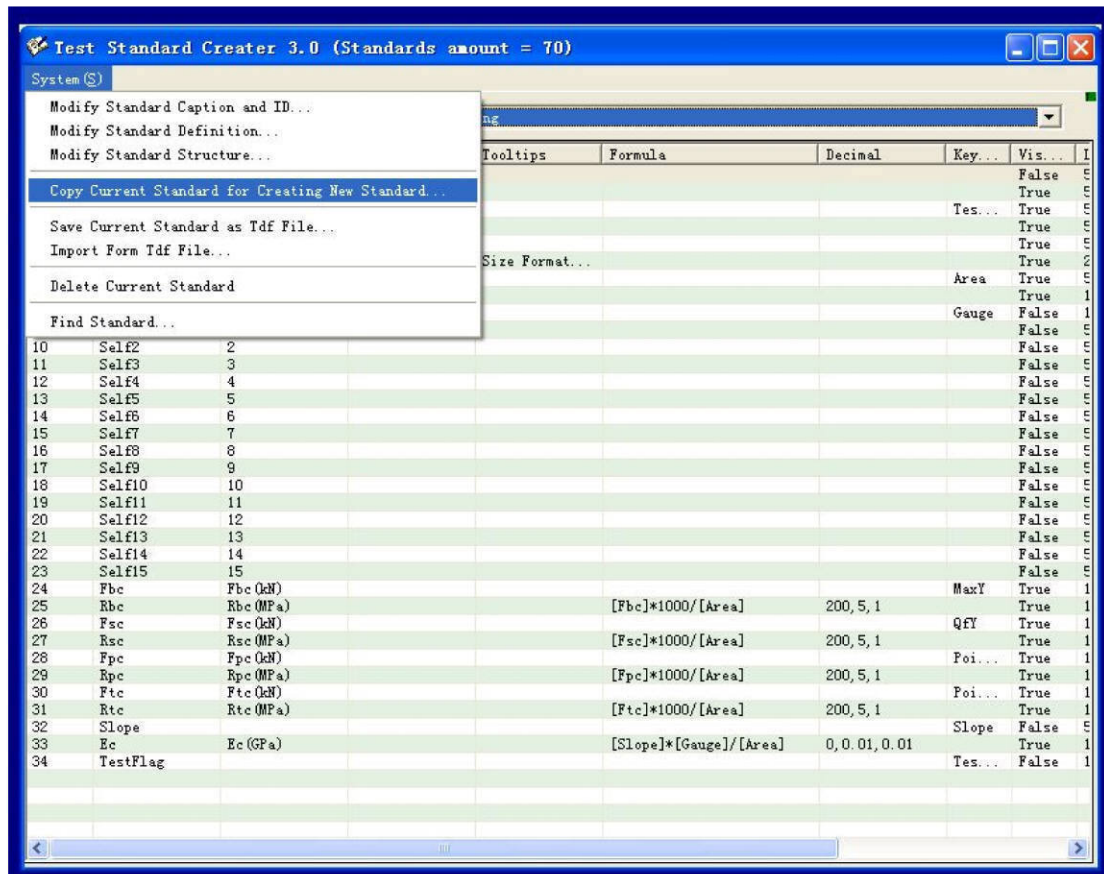
Multi-language function:

With the flexible language edited function, it can support multi-language such as English, Chinese etc. and you can translate the software language into the native language by yourself.



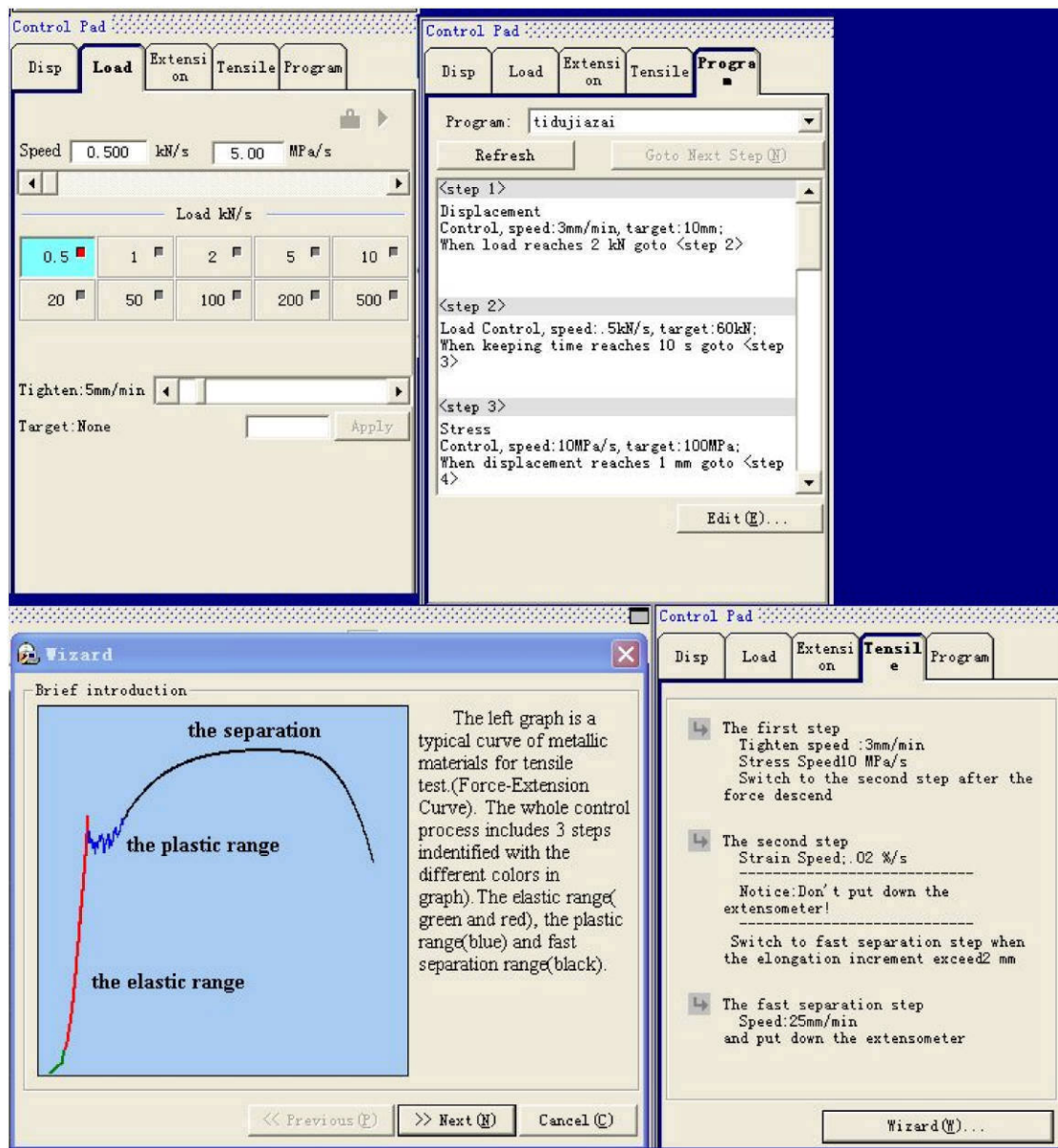
Software supports all kinds of popular testing standards i.e. ISO, ASTM, BS EN, DIN, JIS, GB etc.

Users can modify and add own testing standards and methods.



MaxProgram Editor possesses of multiple full digital control modes, i.e Displacement control, Stress (Load) control, Strain (Deformation) control, Low cycle control. User can edit the most complex and logical procedure

by MaxProgram Editor. The combination of above functions can meet all kinds of routine test purpose.



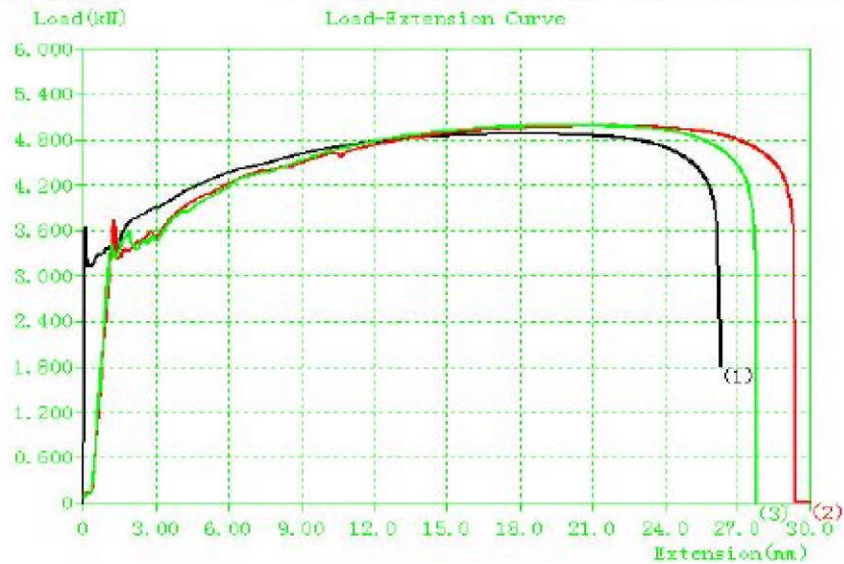
Through the Tensile Program Editor, user can setup test steps according to the requirements of standards.

TE software contains all kinds of Report Templates. Customer can design various testing reports according to the requirements. Test result and curve can be printed in Excel or the auto-creating report template.

Metallic materials -- Tensile testing at ambient temperature

ISO 6892 : 1998

TestDate	2008-9-11		Operator	LW				
Temperature	20℃		Size(mm)	14.9*1				
Lo(mm)	50		So(mm^2)	14.9				
PrintID	SampleID	Rm(MPa)	ReH(Mpa)	ReL(MPa)	Rp(MPa)	E(GPa)	A(%)	Z(%)
1	QD01	327	245	210	233	193	39	21
2	QD02	334	251	223	234	198	42	23
3	QD03	335	240	229	228	205	38	27
4								
Max value		335	251	229	234	205	42	27
Min value		327	240	210	228	193	38	21
Average value		332	245.3333	220.6667	231.6667	198.6667	39.6667	23.667



Print Date: 2009-12-8

DISP MODE	Extension (mm)-Extensometer	0.0
0.000		
DISP MODE	Large Extension (mm)	0.0
0.000		
DISP MODE	Extension-MFL (mm)	0.0
0.000		
Init MFL		
Upper position	50	Gauge (mm) 40
		Locate
Measurement begin		Clear
Measurement ends		

Except the clip-on Extensometer, TE software supports Long Travel Extensometer, Full Automatic Extensometer, video Extensometer, laser Extensometer, and it can be added eight Extensometers at most.

Select load sensor units

Select

5kN

20kN

100kN

300kN

OK

Cancel

TE software supports four load cells.