

Model WDW-150 Computer Control Electromechanical Universal Testing Machine



Application:

Model WDW-150 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, shearing and low cycle reverse stress loading 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 and other material testing. It is widely used in many fields of such as industry factories, research & development, test institutes and training centers etc.

It adopts rigid load frames, high accurate load weighting system, advanced PCIE measuring & control system and intuitive modular application software. Configured with extensive range of accessories for various applications, it can provide the optimal testing solutions for your individual application needs. With abundant experience of 20 years of involvements in materials testing industry & application knowledge on all kinds of sectors, TE is capable of configuring the exactly suitable solutions & more accurately test system to customer involving the choice of load frame, core measuring & control elements, software package, grip/fixture etc based on their specified test application and requirements.

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, BS 3846, EN 10002-4.

Safety: This machine shall conform to all relevant European CE Health and Safety Directives EN 50081-1, 580081-1, 73/23/EEC, EN 61010-1

Load Frame:

Floor models are frequently the choice of those in the composites and metals industries where specimen size and strength require higher load capabilities. The frames all incorporate human factor considerations in the design to ensure safety, reduce operator fatigue, and provide the highest level of flexibility. Extremely robust crosshead guidance is incorporated in all frame designs providing the highest level of lateral crosshead stiffness.

Load cell is with high accuracy interchangeable for all frames allowing each frame to operate full capacity.

High accuracy: The preloaded precision ball-screw with high speed low noise ensures high speed and position measurement accuracy and less noise.

High stiffness: The load frame is with 4 columns and heavy duty pre-loaded bearings.

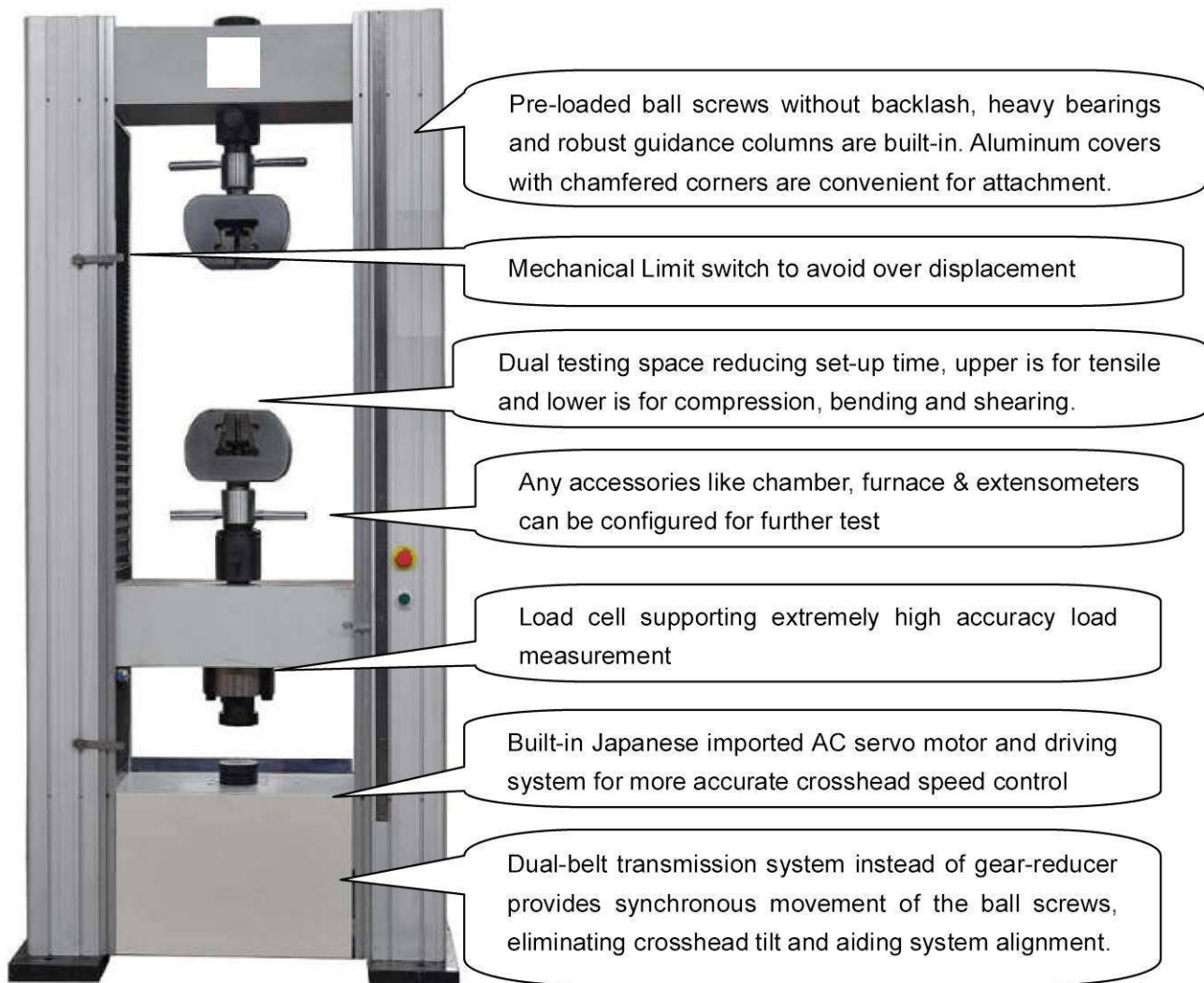
Safety features: The testing machine stops automatically when the change in the test force exceeds a specified value during operations.

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 weighting system (150kN):

Load weighting system is the most critical aspect of mechanical testing. TE has accumulated great experience in selection of superior core loading weight system in terms of materials, design, construction technology and especially performance & accuracy. Cooperating with top-quality manufacturer of load cell, made a special customs design so that it can be optimized match with measuring & control system for most accurate test results.



With advanced PCIE measuring control card, the readability can be from 0.4%(optional is 0.2%) to 100% of the rated capacity, Calibration within 0.5% accuracy can be carried out as per ASTM E4, ISO7500-1, EN 10002-2, BS1610, DIN 51221 standards.

This special load cell provides excellent immunity to impact and side forces, rugged & low-profile measuring body with strictly symmetrical design is optimally suited to ensure high endurance strength. Excellent linearity guarantees highly precise measurement, additional mechanical protection of the strain gage area. It can be set for protections of 105% over range protection, over load capacity of 150% without permanent zero shift and over load projection of 300% of the rated capacity without mechanical damage. This meets the stringent Weights and Measures requirements throughout Europe and the USA.

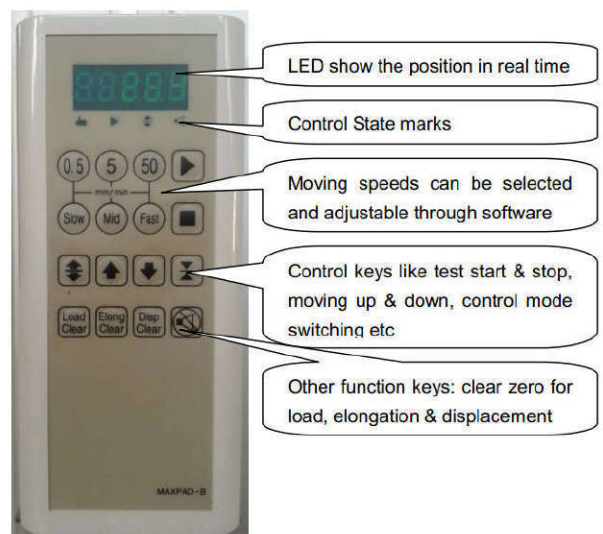
Electronics and Control Part:

Self-developed & most advanced card for testing machine realizes the functions of real time data collection, communication, measuring and control etc. according to related ASTM, ISO standards. It can be inserted PCI slot of computer and connected with testing machine by data cable, then above functions can be done easily. Effective sampling rate can be up to 50Hz, which is quite enough for all kinds of metallic test standards.



A second component of this series is the manual control panel MaxPad which magnetically attached the load frame providing crosshead moving control in adjustable three speeds & LED showing in real time and some functional keys like test start & stop, moving up & down etc.

Patent technology of : Calibration of load and extensometer separately by electrical way and provide you a quick convenient way. No necessary to calibrate the load and extensometer by calibrators. Do the calibration whenever you need. **(Optional)**



Main Specification

- Load capacity: 150kN
- Load measuring range: 0.4%~100% of rated capacity (0.8kN-200kN)
- Load accuracy: Class 0.5
- Load resolution: 1/500,000FS.
- Position resolution: 0.025μm
- Position accuracy: ±0.02mm or 0.5% of displacement (whichever is greater)
- Crosshead speed range: 0.001-500mm/min
- Crosshead speed accuracy: ±0.5% of set speed (zero or constant load)
- Total Crosshead Travel: 1500mm
- Space between columns: 600 mm
- Max tensile space: 600mm
- Max compression space: 1050mm
- Stiffness of load frame: 300kN/mm
- Double ball screws driven with close-loop and servo motor control.
- Power supply: 380VAC, 3 phase, 50/60Hz
- Overall dimension: 1100x730x2390mm
- Weight: 1300kg

Standard Accessories:

- 200kN capacity wedge action grips

Inserts for round specimen: Φ8~16mm, Φ16~24mm, Φ24~32mm 1 set for each

Inserts for flat specimen 0~9mm, 9~18mm, 18-27mm 1 set for each



- Compression steel plates with dia.100mm platens & ball seating assembly for lower platen: 1set



- Bending fixture (**optional**) 1 set

Max. Bending span: 30-420mm, roller dia. 30mm



- Clip on Electronic Extensometer 1 set

Gauge length: 50mm, travel 10mm



- Computer & software 1 set

Computer: Dell, with the following configuration: Dell, Intel Pentium G3250 Dual-core (2 Core) 3.20 GHz, 3MB processor, 2GB, DDR3 1600MHz, SATA 7200RPM, HD 500G, 16X DVD-ROM Drive, Windows 8.1 basic system 64bit with license; 19inch screen LED monitor, photoelectrical mouse, and multiple keyboard;

Software: **English & Russian Version** (For details, please refer **Annex-1**)



- Servo Control system

1 set

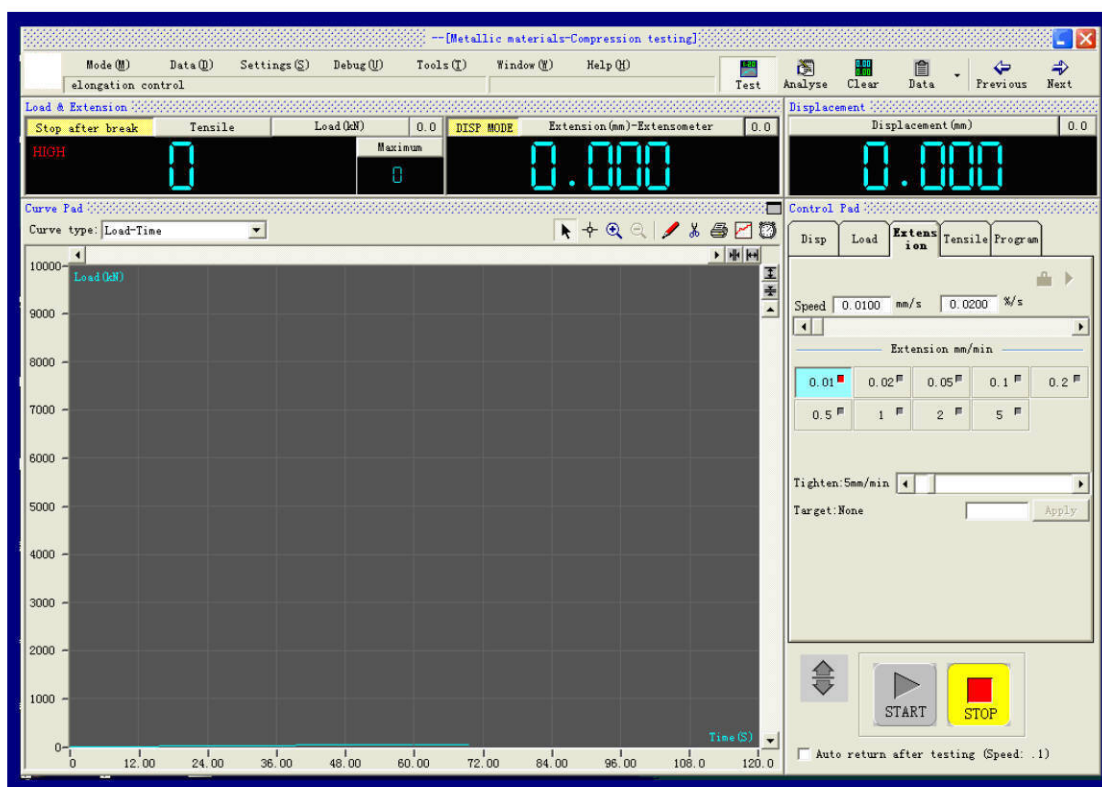
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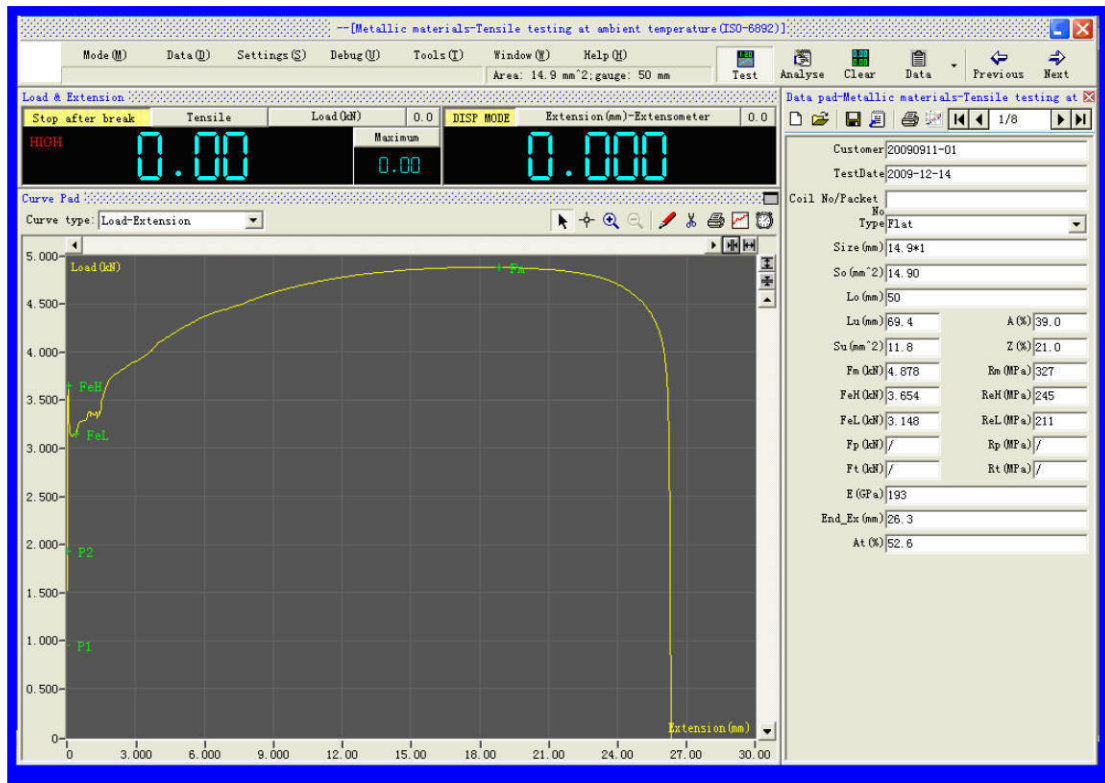


Annex-1

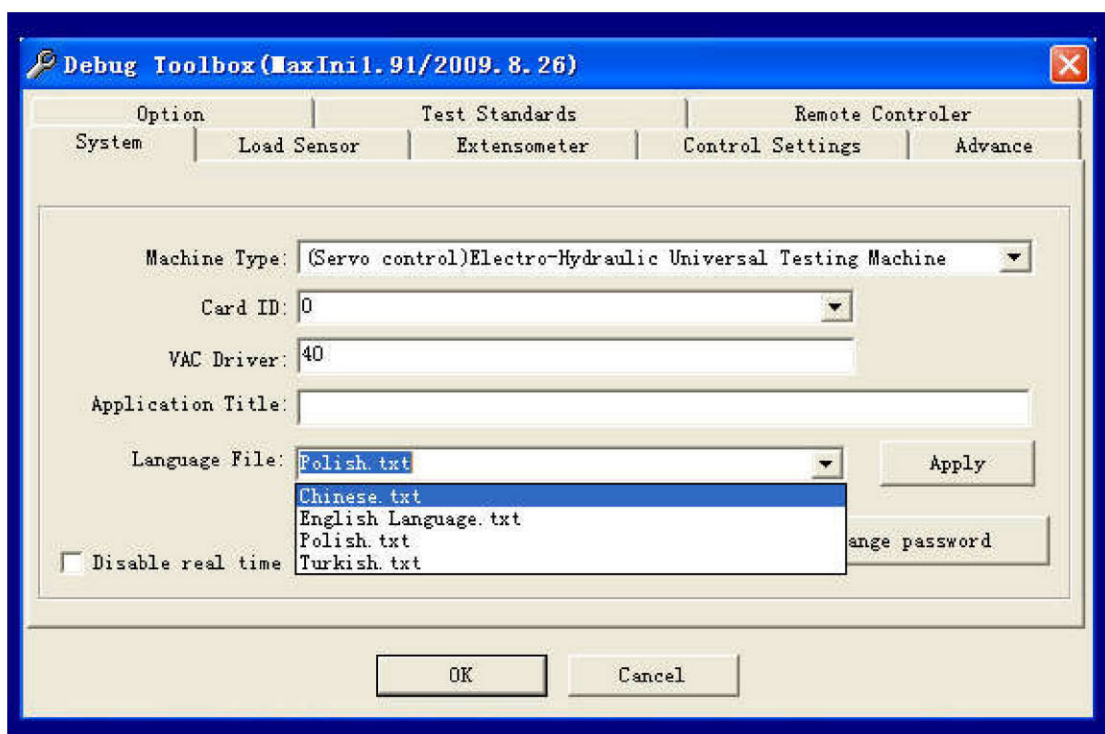
Features of Measuring & Control Software

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.



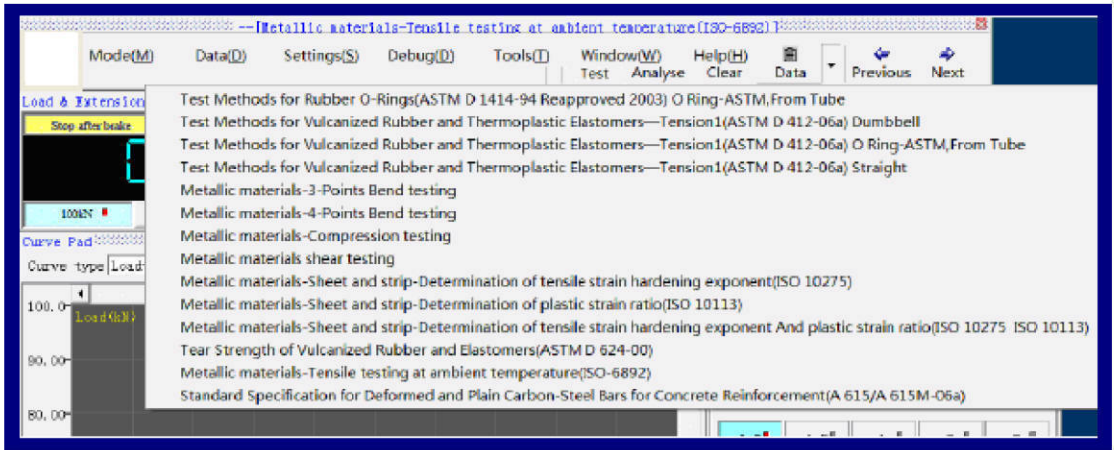


The control modes, test data and curves can be displayed in real time in the main interface and can be shifted at any time.

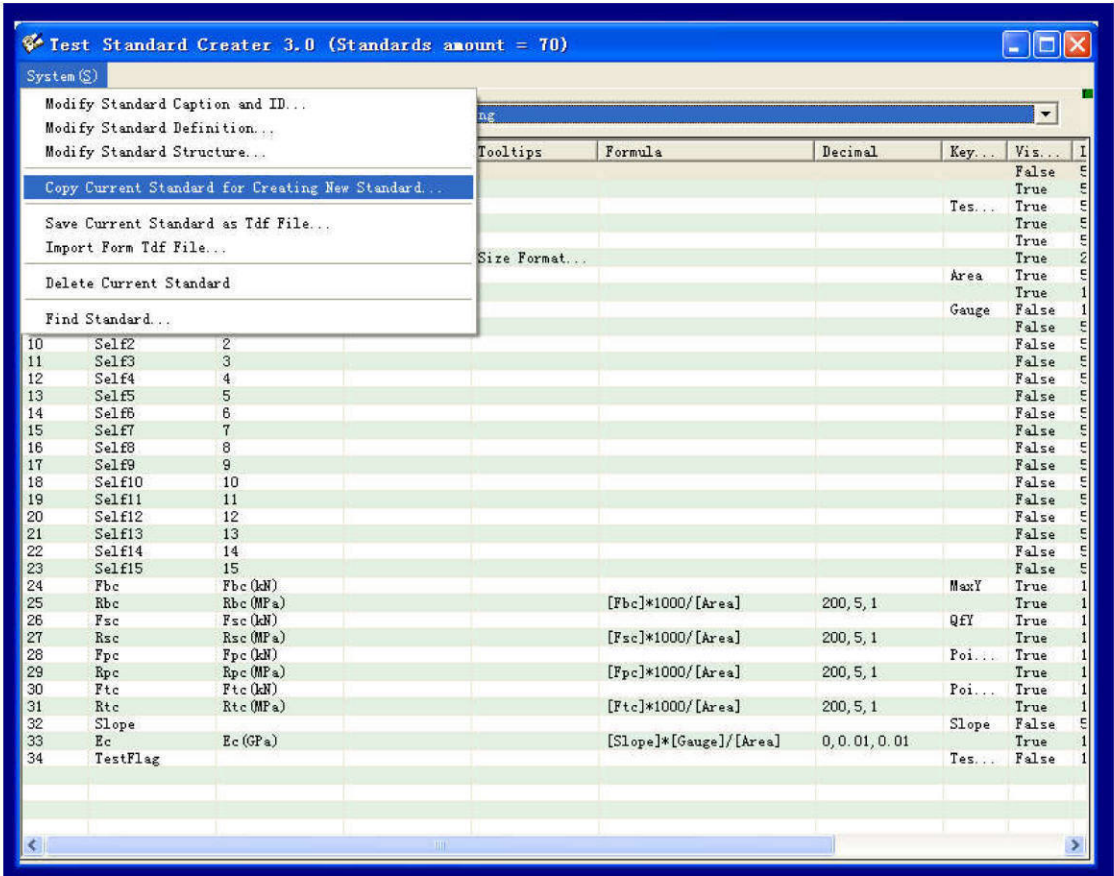


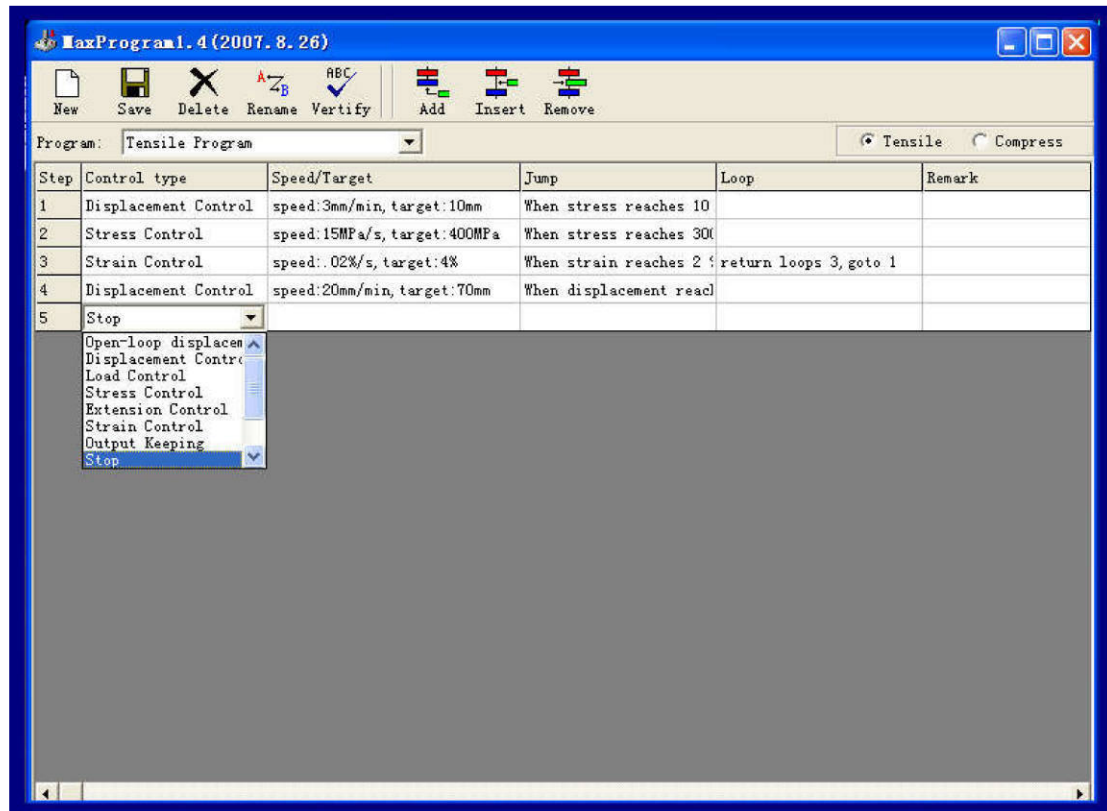
The deep-seated parameters of software are contained in Debug Toolbox
Multi-language function:

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.

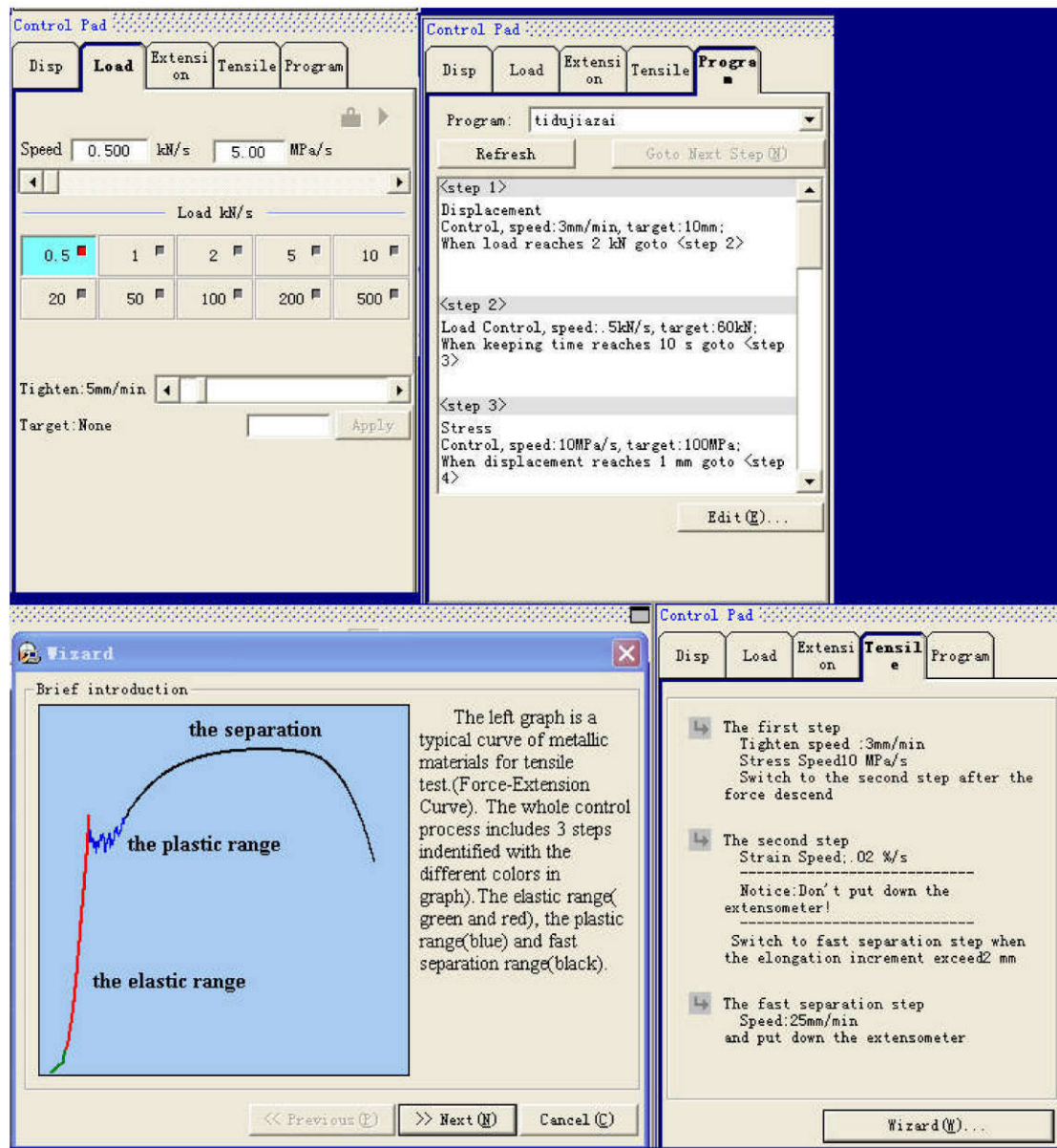


Software supports all kinds of popular testing standards i.e. ISO, ASTM, BS EN, DIN, JIS, GB etc. Users can modify and add own testing standards and methods.

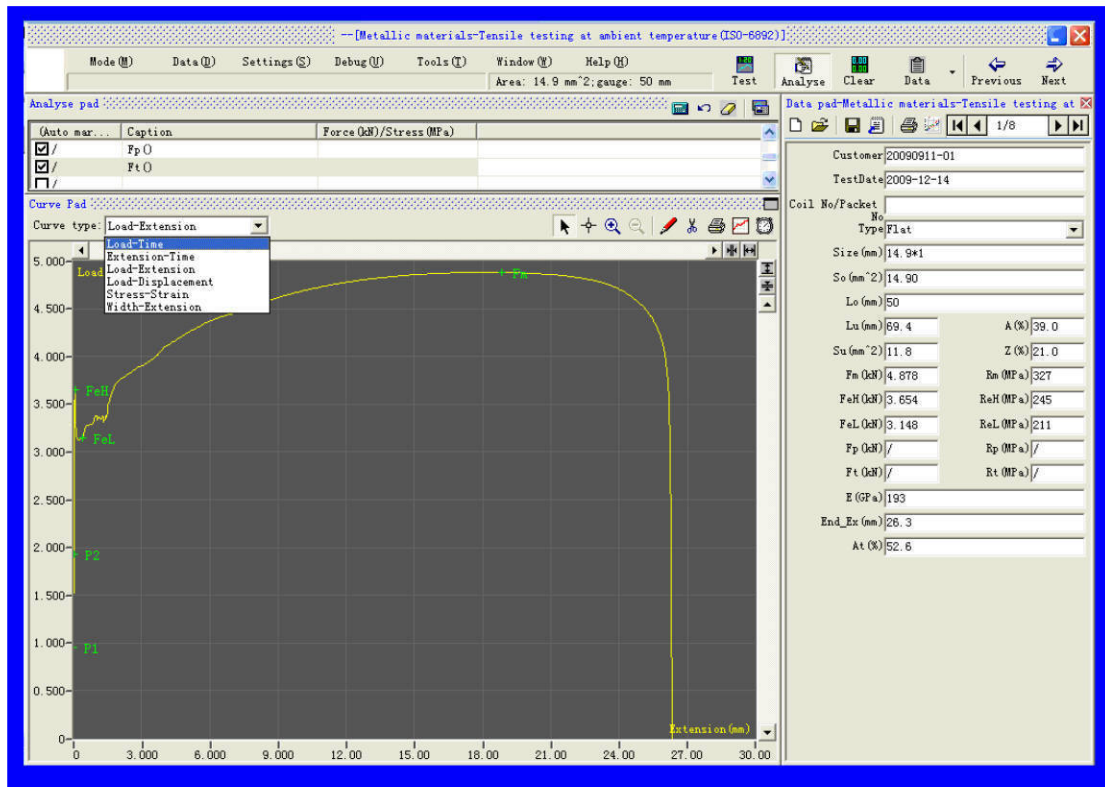




MaxProgram Editor possesses of multiple full digital control modes, i.e Displacement control, Stress (Load) control, Strain (Deformation) control, Low cycle control. User can edit the most complex and logical procedure by MaxProgram Editor. The combination of above functions can meet all kinds of routine test purpose.



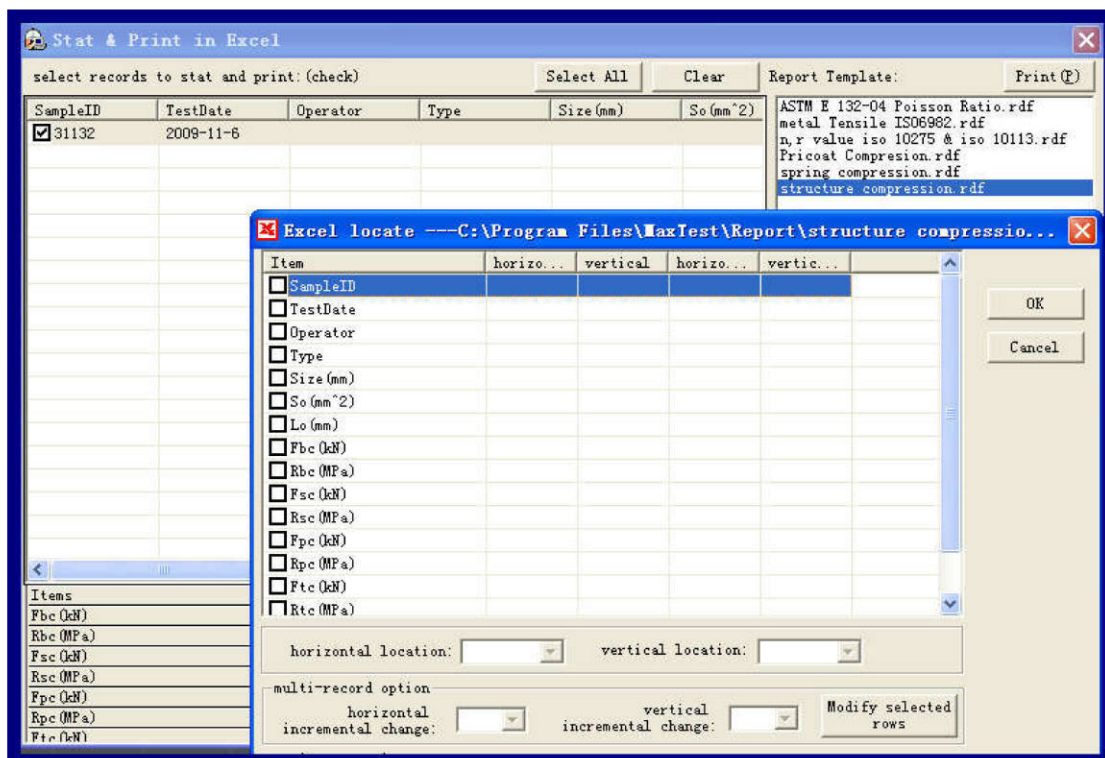
Through the Tensile Program Editor, user can setup test steps according to the requirements of standards.



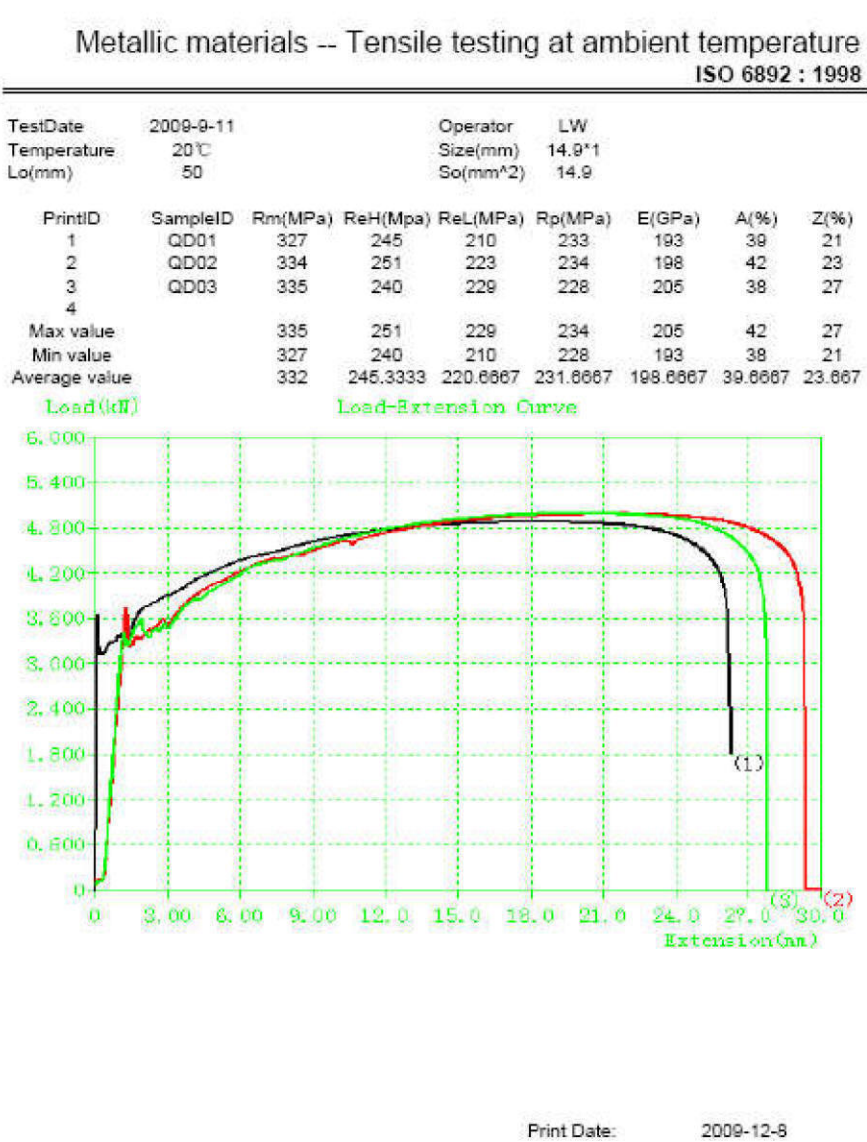
Multiple curves function in real time display including Load-Extension, Load-Displacement, Stress-Strain, Load-Time, Extension-Time, and Width-Extension.

Characteristic points such as Elastic Modulus, Yield points, Rp, Rm etc. can be marked on the curves, for a highlighted and visual observation.

Test result can be obtained automatically and also it can be got from the test curves manually.



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.



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, 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

software supports four load cells.