WAW-E Series Computer Control Electro-hydraulic Servo Universal Testing Machine

Application:

WAW-E series are suitable to test various metallic & non-metallic materials for tension, compression, bending and shearing strength. It can be capable of testing the characters of materials on physical & technology properties. It is simple, easy to operate and widely used in works, laboratories and high schools for material properties research and quality control. Equipped with the computer & Software & printer, it can display, record, process and print the test results, and control test procedures as the set program and can draw test curves automatically in real time. The machine complies with ASTM, DIN, ISO standards.

Applied Standards:

Load meets or exceeds the following standards: ASTM E4, ISO7500-1, EN 10002-2, BS1610, DIN 51221.

Strain measurements meets or exceeds the following standards: ASTM E83, ISO 9513, EN 3846 and EN 1002-4.

Model	WAW-50E/100E	WAW-300E	WAW-600E	WAW-1000E	WAW-2000E
Max. Capacity (kN)	50/100	300	600	1000	2000
Load Accuracy	±1.0%				
Max. Tension Distance (Including travel of piston (mm)	750	650	700	700	1100
Computer Data Processing	Upper & lower yield point, Max load point, testing load of breaking point, stress, deformation, elongation rate, elastic module & Rp0.2.etc.				
Flat Specimen Clamping Thickness	0—15mm	0—15mm	0—30mm	0-40mm	0—60mm
Round Specimen Clamping Diameter	Φ6—22mm	Φ9—32mm	Φ13—40mm	Φ20—60mm	Φ30—80mm
Max. Compression test space (Excluding test bench)(mm)	192	630	630	680	850
Size of compression plates	Φ125mm	Φ120mm	Φ120mm	Φ150mm	Φ200mm
Diameter of shearing (mm)	10	10	10	10	10
Effective distance between two columns of tension space	405 mm	440 mm	480 mm	570 mm	750 mm
Adjusting speed for testing space(mm/min)	200	200	200	150	150
Motor power (kW)	2.5	2.5	2.5	3.5	8.5
Weight (kG)	1200	1500	2600	3700	9800
Overall dimensions of Main unit (including max. stroke of piston) mm3	595x450x2140	725x560x1950	770x600x2100	900x670x2350	1300x900x3530
Oil source dimensions	550x550x1450	550x550x1450	550x550x1450	550x550x1450	650x750x1450

HLC Series Compact Servo Control Hydraulic Universal Testing Machine

Application:

The series hydraulic universal testing machine is compact design with powerful functions. It can do tensile, compression, bending, shearing, hardness, low cycle for metal and non-metallic materials.

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, EN 3846 and EN 1002-4.

Specifications:

Model	HLC-50	HLC-100	HLC-150/200
Max. Load(KN)	50	100	150/200
Load accuracy (%)	±0.5%/ ±1%		
Tensile space	350mm		
Piston stroke	200mm		
Load speed	0.5-100mm/min		
Return speed	100mm/min		
Compression space	600mm		
Distance between columns	360mm		
Tensile grip	Round: Ø4-20mm Flat: 0-21mm		Round : 9-26mm Flat: 7-21mm
Compression platen	Ø100mm		
Dimensions	750x510x1610mm		
Net weight	180kg		200kg

Model WAW-F Series Computer Control Hydraulic Servo Universal Testing Machine

Application:

WAW-F series Computer Control Hydraulic Servo Universal Testing Machine are with one workspace design. It can also do the compression, bending and shearing tests. Force measurement is through load cell. With long travel actuator stroke, it is suitable for standard or long length specimens, high elongation test.

Applied standards:

Load meets or exceeds the following standards: ASTM E4, ISO75000-1, EN 10002-2, BS1610, DIN 51221. Strain measurement meets or exceeds the following standards: ASTM E83, ISO 9513, EN 3846 and EN 1002-4.

Specification:

Model	WAW-300F/400F	WAW-500/600F	WAW-1000F	WAW-1500F/2000F
Max. load capacity(kN)	300/400	500/600	1000	1500/2000
Accuracy of testing force	±0.5%/±1%			
Max. Tensile space(mm)	600	600	700	800
Max. Compression space(mm)	300	300	450	500
Actuator stroke(mm)	500	500	500	600
Max. Loading speed	100 mm/min	100 mm/min	75 mm/min	50 mm/min
Distance between columns(mm)	520	600x350	660x400	800x450
Round insert(mm)	Φ10-32	Φ13-40	Φ13-60	Φ10-70
Flat insert(mm)	0-15	0-30	0-40	0-60
Compression platens	Φ120mm	Φ150mm	Φ150/204x204mm	Φ200/204x204mm
Accuracy of deformation	±0.5%/±1%			
Dimensions of load frame(mm)	880x630x2980	880x630x2980	980x720x3530	1220x880x4180
Weight(kg)	2500	3000	5000	8000

Hydraulic Universal Testing Machine

WE Series Analog Dial Display Hydraulic Universal Testing Machine

Model	WE-50	WE-100	WE-300	WE-300C	WE-600	WE-600C	WE-1000A	WE-1000C	WE-2000
Max. Capacity (kN)	50	100	300		600		1000		2000
Measuring range (kN)	0-10 0-25 0-50	0-20 0-50 0-100	0-60 0-150 0-300		0-120 0-300 0-600		0-200 0-500 0-1000		0-500 0-1000 0-2000
Load accuracy	≤±1.0%								
Max. Tension Distance (Including travel of piston)	600mm	600mm	550 mm	800 mm	600 mm	900 mm	780 mm	900 mm	850
Flat Specimen Clamping Thickness (mm)	60/0—15	60/0—15	60/0—15	60/0—15	60/0—30	60/0—30	120/0—40	60/0—55	120/0—50
Round Specimen Clamping Diameter (mm)	Φ3—14	Φ6—22	Φ10—32	Φ10—32	Φ13—40	Φ13—40	Φ13—60	Φ12—60	Φ15—70
Max. Compression test space (Excluding test bench)(mm)	0-355	0-355	0-300	0-700	0-300	0-800	0-780	0-800	0-800
compression plates Size	Φ125mm	Φ125 mm	Φ120 mm	Φ120 mm	204x204	204x204	204 x 204	204x204	204 x204
Width of Bending supports	100mm	100mm	140mm	140mm	140mm	140mm	140mm	140mm	140mm
Diameter of shearing	10mm	10mm	10mm	10mm	10mm	10mm	10mm	10mm	10mm
Effective distance between two columns of tension space (mm)	420	395	590	590	580	580	675	675	690
Max. Elevating velocity of test bench (mm/min)	200	200	150	120	150	200	150	100	150
Motor Power	1.5	1.5	2.0	2.6	2.0	2.6	2.0	5	7.7
Weight (kg)	1000	1000	2200	2300	2500	3500	5000	6080	11900
Dimensions(including piston max. stroke) mm^3	610x700 x 2750	610x700x 2750	1250x660 x29 87	900x60 0x 2550	1255x660 x3290	1100x120 0 x2933	1250x900 x3900	800x1320 x3100	1510x104 0 x4700

Controller:

There are three kinds of controllers to meet different applications:
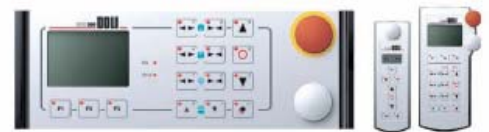
- PCI card. It is full digital card built-in the computer.
- Full digital controller from TE. It can operate the machine by itself and also can be controlled by Computer.
- EDC controller. Load cell self-indentify function.
- Data sampling rate can be reached to 1kHz. (option)

Specifications

- Interface Processor AMD 520, 133MHz
- Load resolution ±180,000 steps, two ranges 2mV/V and 4mV/V
- Control loop frequency 1kHz
- RS485 Interface for external keyboard/display, supports a maximum of four devices
- Drive Interface ±10V (16bit) analogue command output, digital command output and safety   functions
- PC communication via USB or Ethernet Two I2-Bus-Extension-Slots
- Internal socket for serial sensors (COM 1)
- Internal socket for debug (COM 2)
- Internal socket for synchronising several EDCs
- Internal socket for servo valve amplifier

Wireless controller

Extensomter

Extensomters, including Clip-on type, Automatic type, Video type, Laser type, meet differents test requirements.

Long Travel Extensometer

Extensometer for round specimen

Extensometer for flat specimen

Axial extensometer

Transverse and axial extensometer

r&n value extensometer
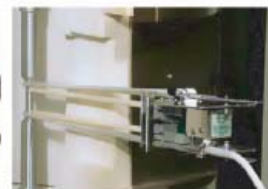
High temp. extensometer

Video extensometer

Laser extensometer

Full automatic extensometer

**Testing Fixtures for Different Tests**
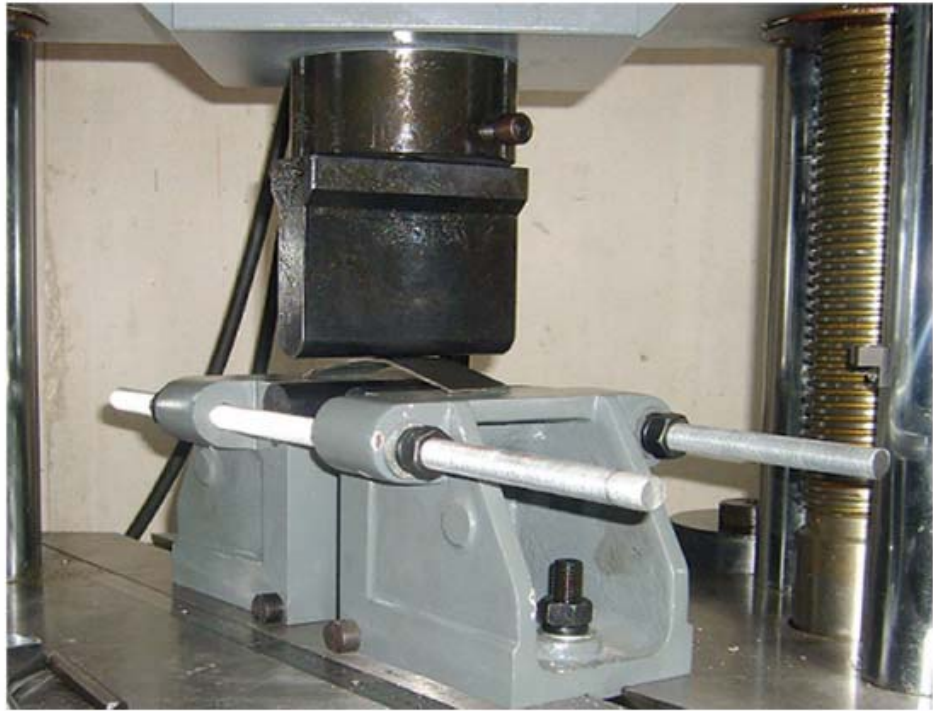
Software Features:

TE software refers to the characteristics of the famous brands of testing machine in the world, and proposals of various testing requirements from end users, and combines all the major advantages of earlier versions of software with lots of new features. Optimized software structure makes the testing operation easy, convenient and powerful.
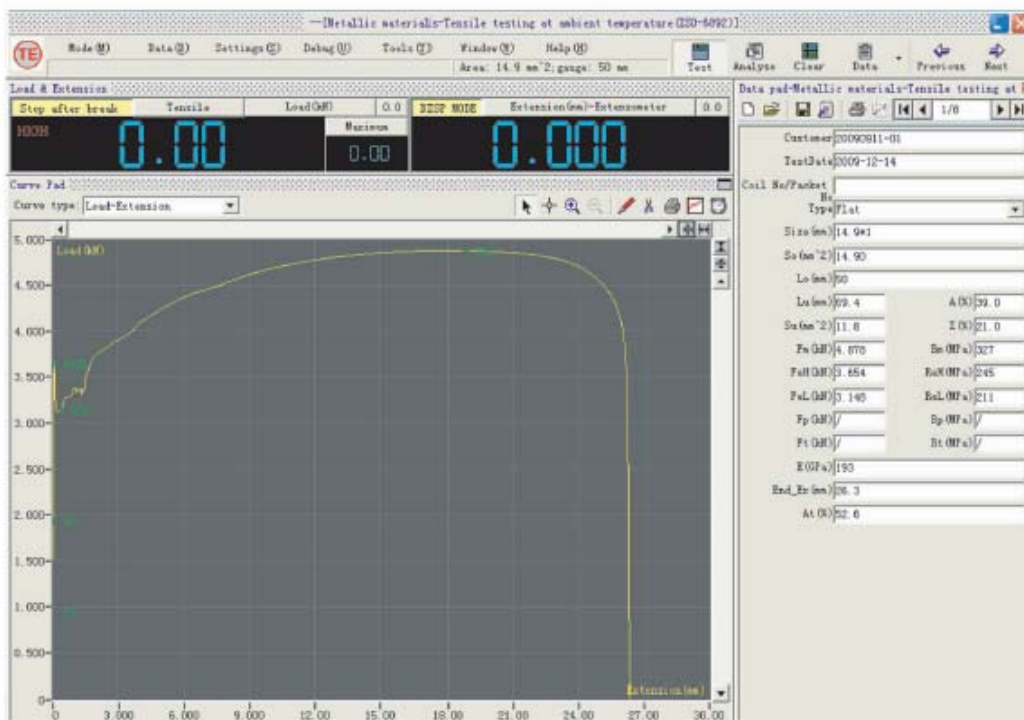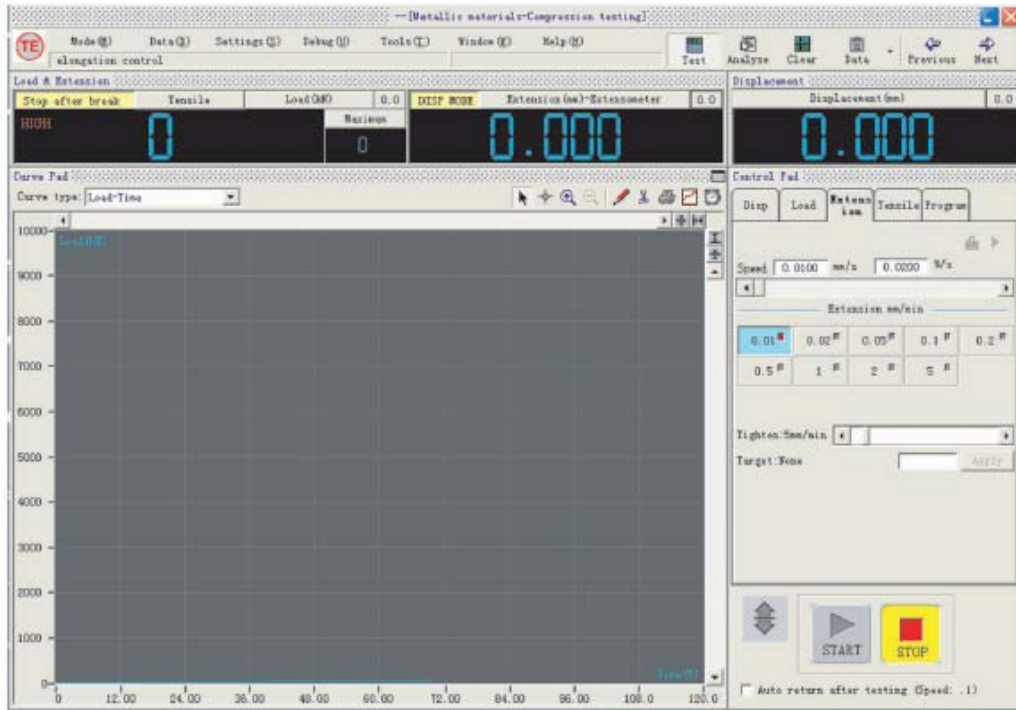

The control mode, test data and curves can be displayed in real time in the main interface and can be switched at any time.
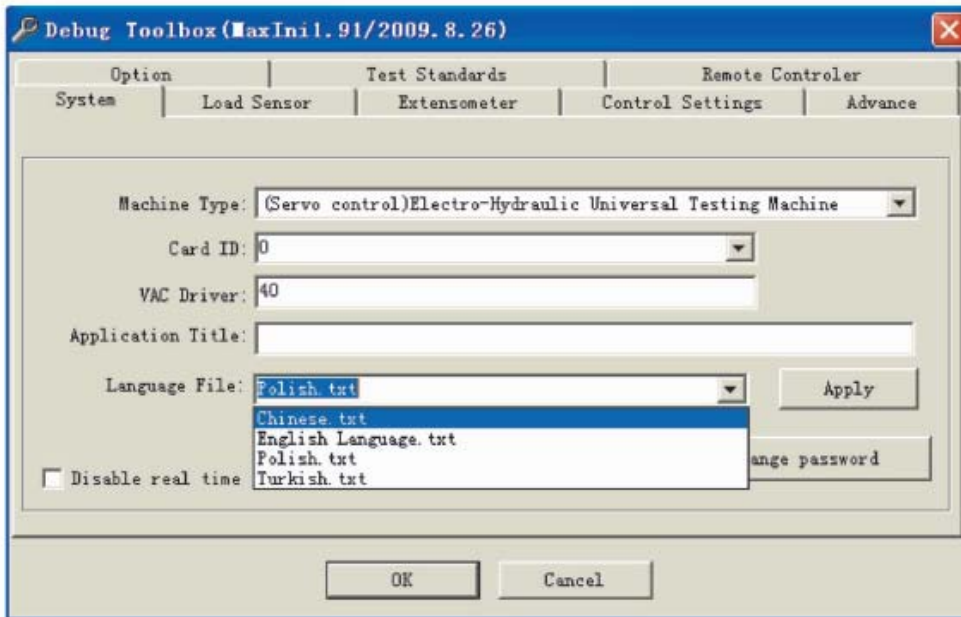
The deep-seated parameters of software are contained in Debug Toolbox

Multi-language function:

With the flexible language edited function, it supports Multi-language such as English, Chinese. You can translate the software language into native language by yourself.
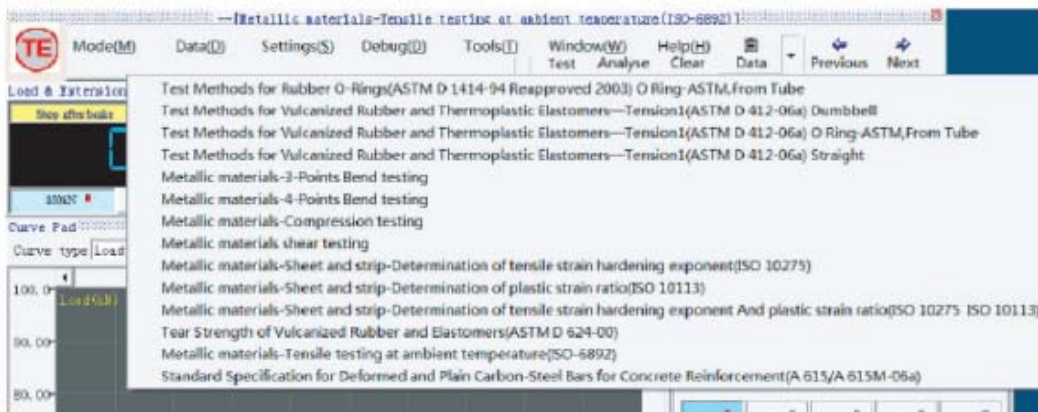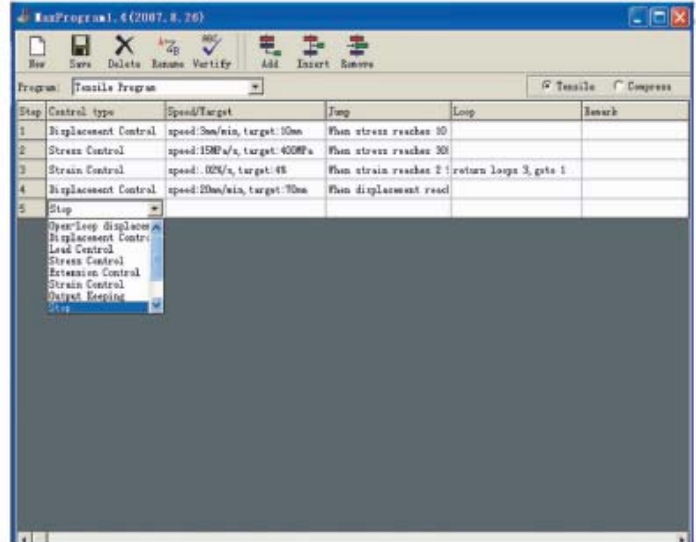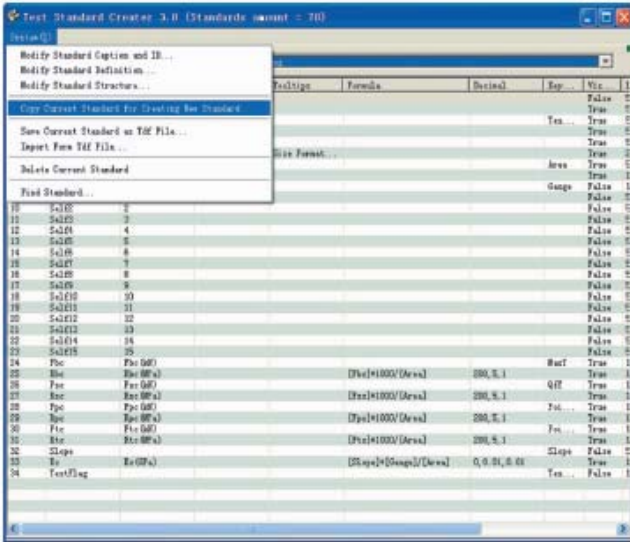

Software supports all kinds of popular testing standards i.e. ISO, ASTM, BS EN, DIN, JIS, GB etc.

Users can modify and add own testing standards and method as your requirement.
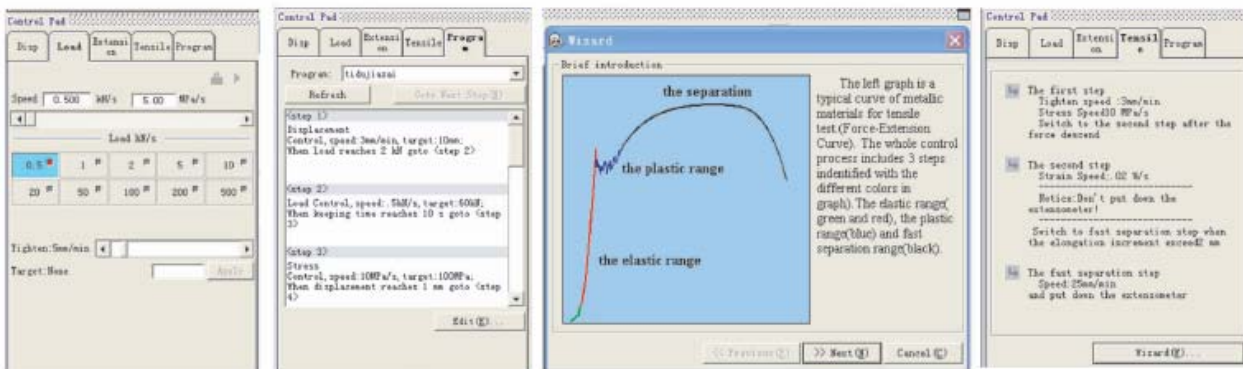
Through the Tensile Program Editor, user can setup test steps according to the requirment of standards.

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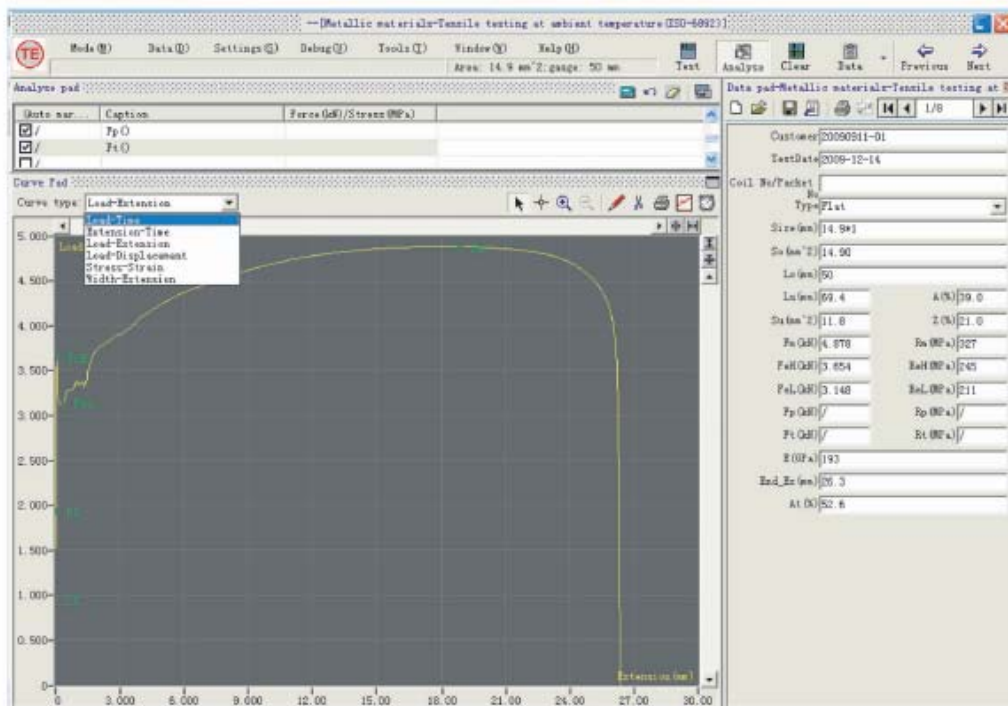

Multiple curves function in real time display including
load-Extension,Load-Displacement,Stress-Strain,Load-Time,Extension-Time,Width-Extension Characteristic points such as Elastic Modulus, Yield points, Rp, Rm etc. can be marked on the curves, for a direct and highlighted observation.
Test result automatically can be obtained and also it can be manually got from the test curves.
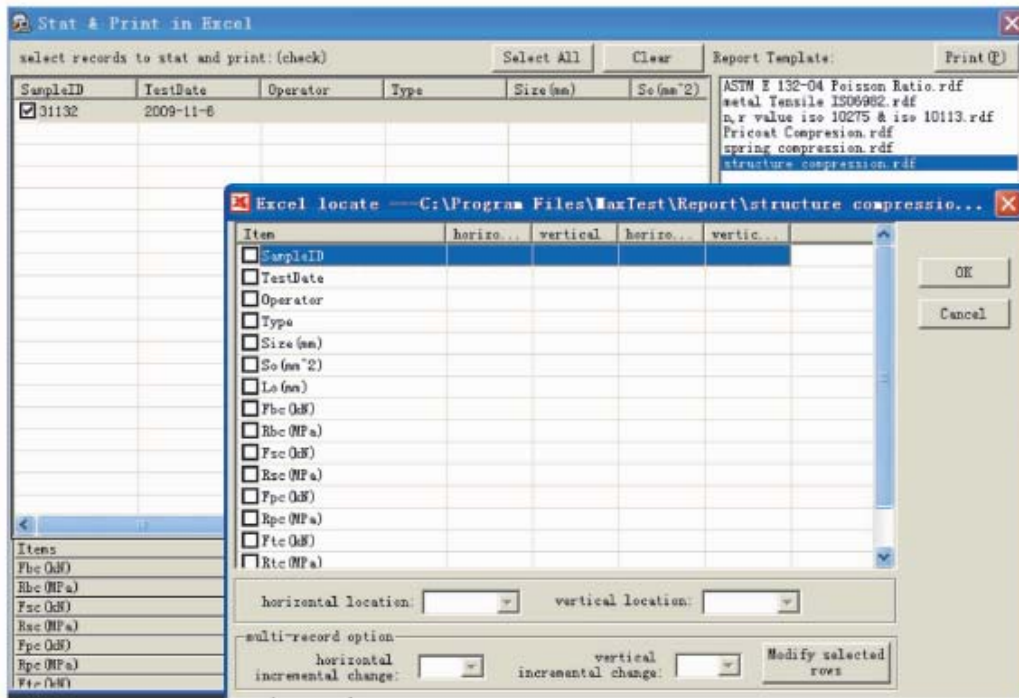
TE software contains all kinds of Report Templet. Customer can design various testing reports according to the requirement. The test result and the curve can be printed in Excel or printed in the auto-creating report template.
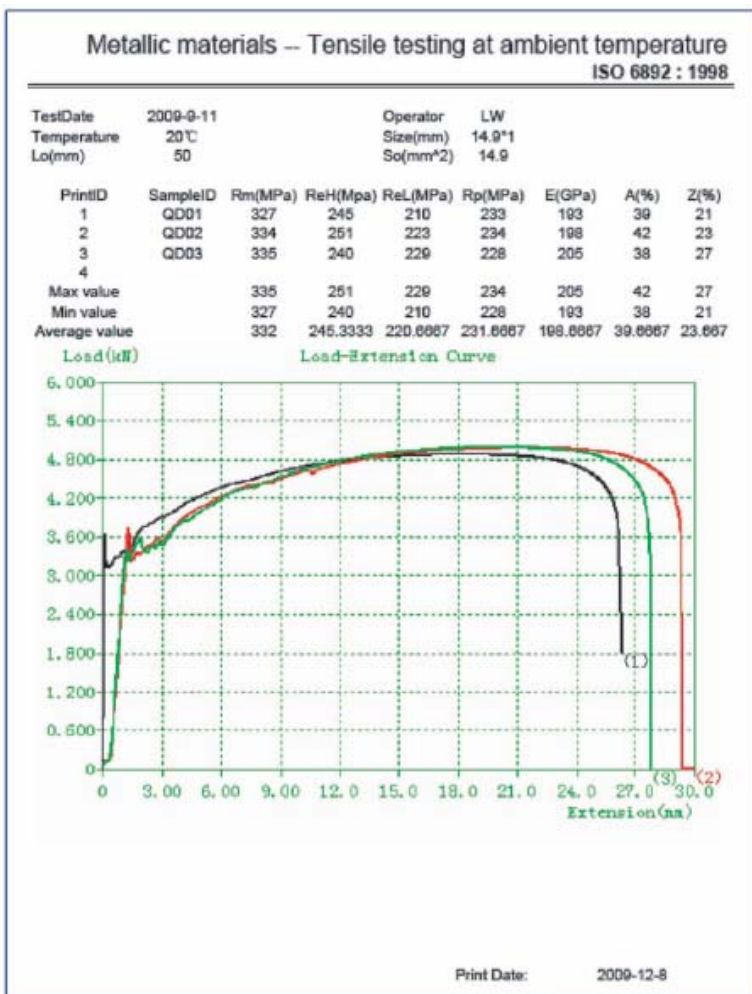
Except the clip-on Extensometer, TE software supports Long Travel Extensometer, Full Automatic Extensometer, video Extensometer, laser Extensometer, and it can be added eight Extensometers at most.
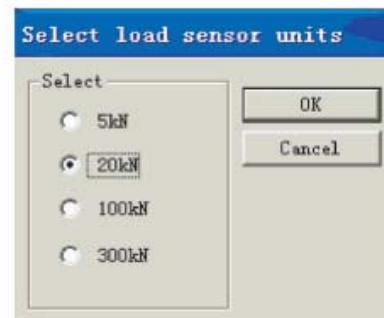
TE software supports four load cells.