

TMA-WDW-50E Computer Control Electronic Universal Testing Machine

1. Brief Information

Model TMA-WDW-50E computer control electronic universal testing machine is designed and manufactured according to ASTM, ISO, DIN, etc. Standard. 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 fields such as industry factories, mineral enterprise and high schools.



Picture for reference

2. Features

- with remote control box to realize speed control of crossbeam, flexibly and freely switched. It can display load, displacement, peak, speed.



- with function of automatic return to original position, intelligently, efficiently, quickly;
- with limit protection function of any working position and over voltage, over current protection functions, reliable, safe;
- with strong test data, which can save, inquire and retrieve test data anytime.
- with many control modes of constant speed control to force, stress, deformation, strain, stroke, load, elongation, displacement and low cycle and user self-programming control;

switch among many test curves: stress-strain curve, load-deformation curve, load-displacement curve, load-time curve, deformation-time curve, displacement-time curve, load-strain curve, partial enlargement, overlap and comparison.

3. Technical Specification

Mode	TMA-WDW-50E
Load capacity	50KN
Grade/class	Class 0.5

Measuring range of load	1%-100%FS
Relative error of indication	±0.5%
Load resolution	1/±300000FS
Measuring range of deformation	0.2%-100%
Speed control range of displacement	0.005-500mm/min
Speed control accuracy of displacement	Within ±0.2% of the set value
Travel of cross beam (without grips)	1000mm
Test span	400mm
Motor power of machine	750W
Working voltage	240volts, Single phase, 50 HZ
Dimension of loading machine (W*D*H)	Approx. 950*640*1850mm

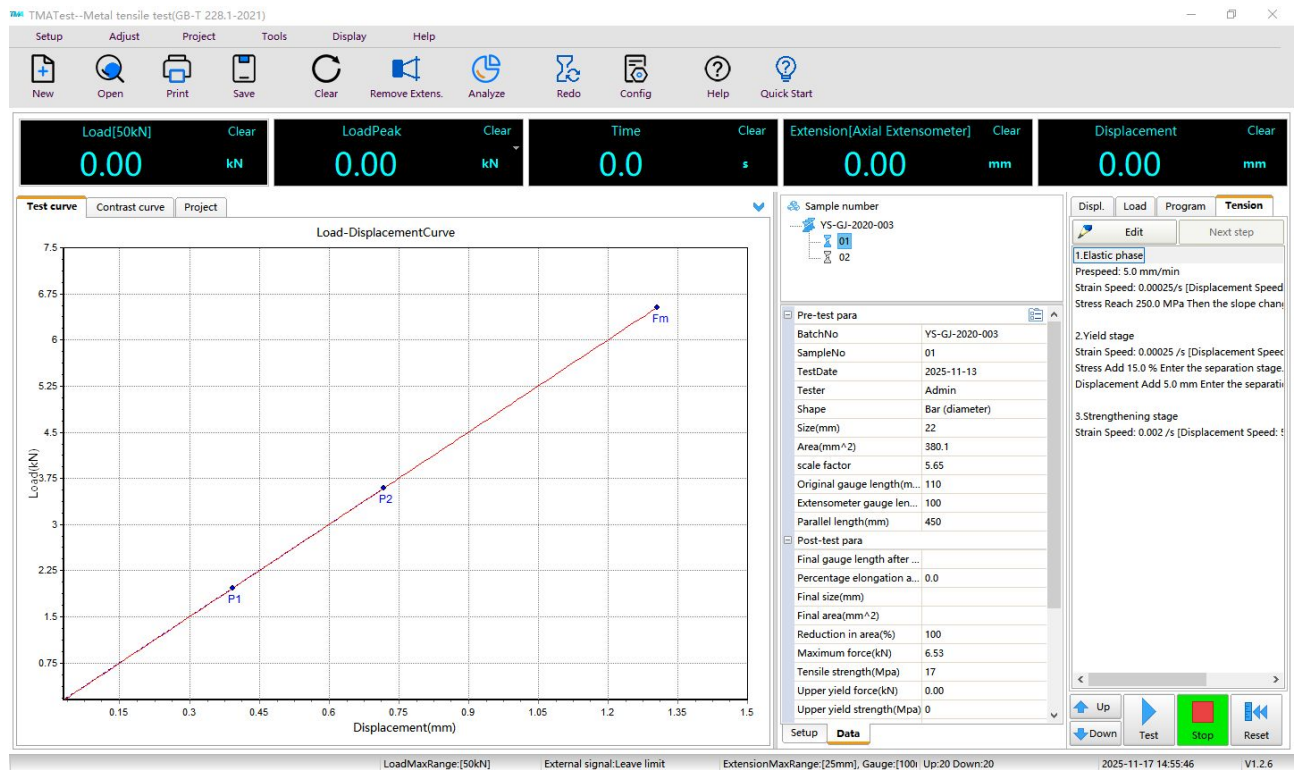
4. Standard Configuration

No.	Content	Details	Qty.
1	Load frame	Aluminum alloy cover with streamline design High intensity testing machine structure and cross head High stiffness to assure accuracy	1set
2	Servo motor and drive system		1set
3	Precise load cell	50kN	1 pc.
4	Hand-held controller	For control of the movement of the cross head	1pc.
5	Tensile test fixture	Wedge grips Flat jaws: 0-7mm, 7-14mm Round jaws: Φ4-Φ9mm, Φ9-Φ14mm	1set 2sets 2sets
6	Compression test fixture	Pressure platens Φ100mm	1set
7	Computer	Brand: Lenovo With Latest original English operation system	1set
8	TMATest software	Special for electronic UTM	1set

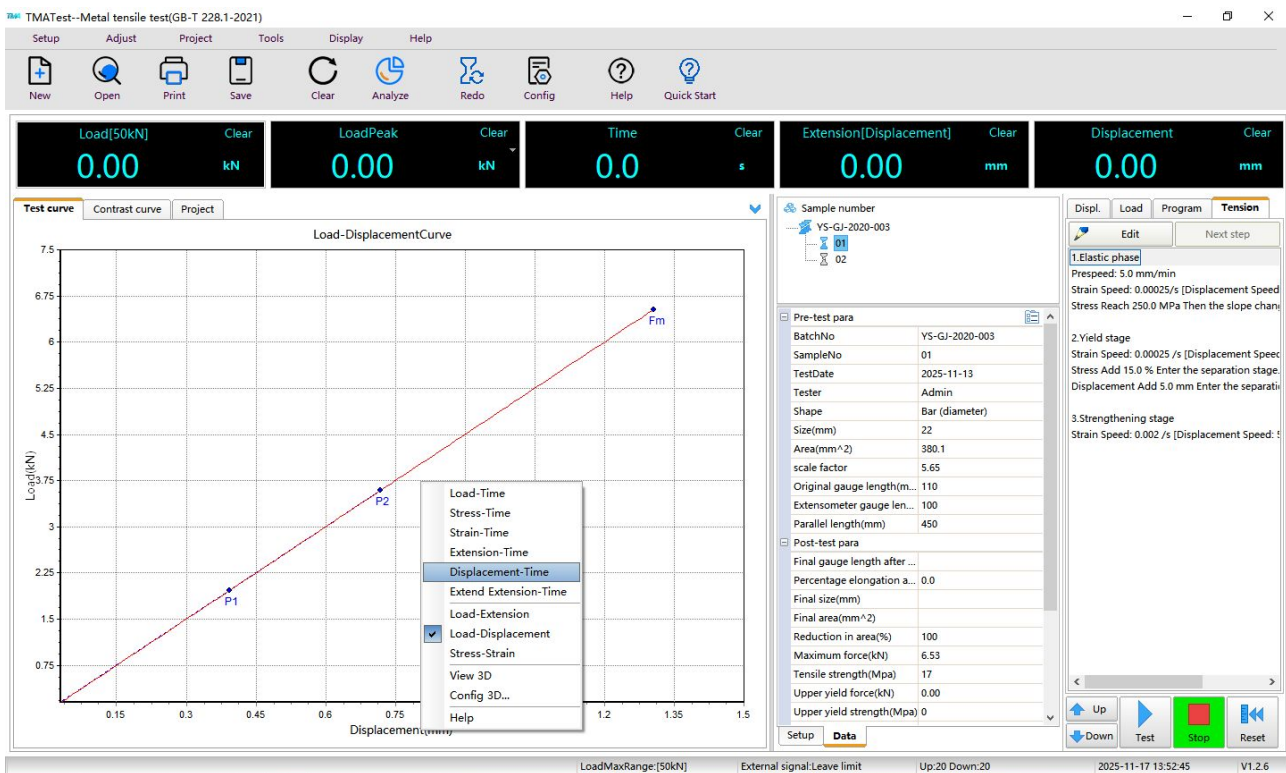
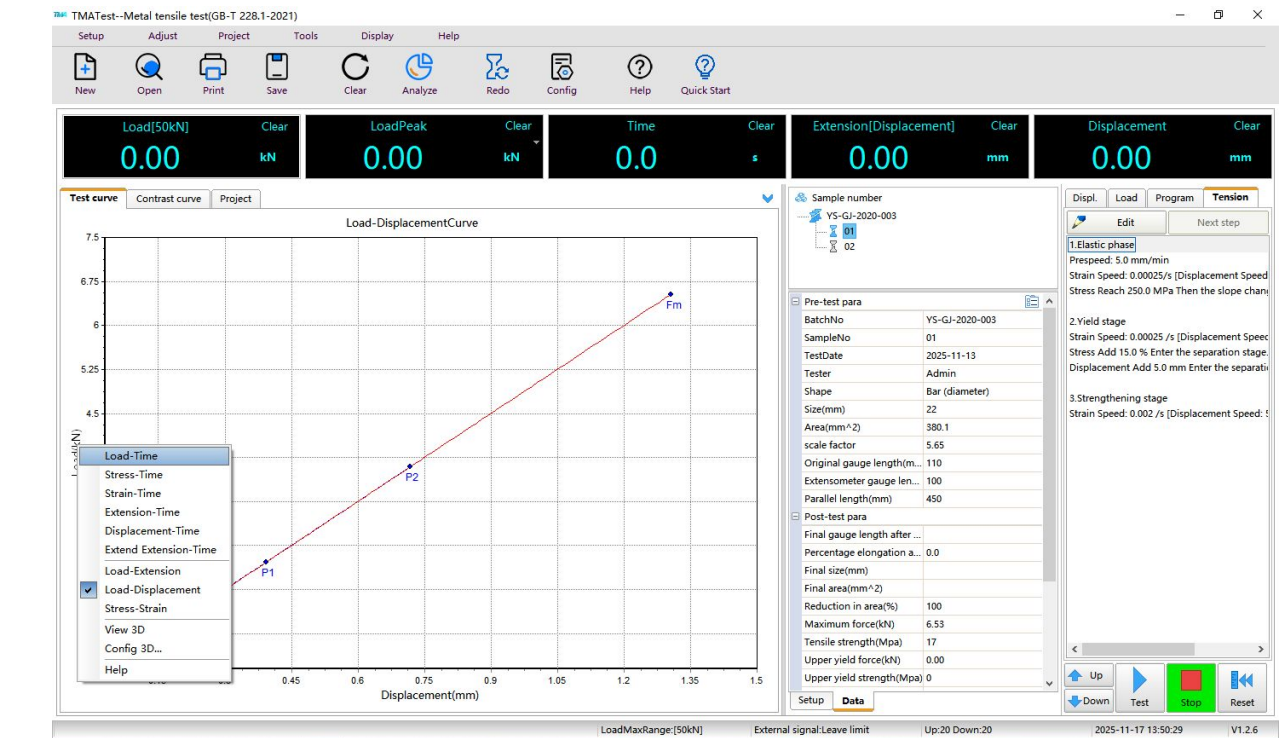
9	Documents	User manual, electrical diagrams, certificate, etc.	1 set
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5. TMA Test Software Introduction

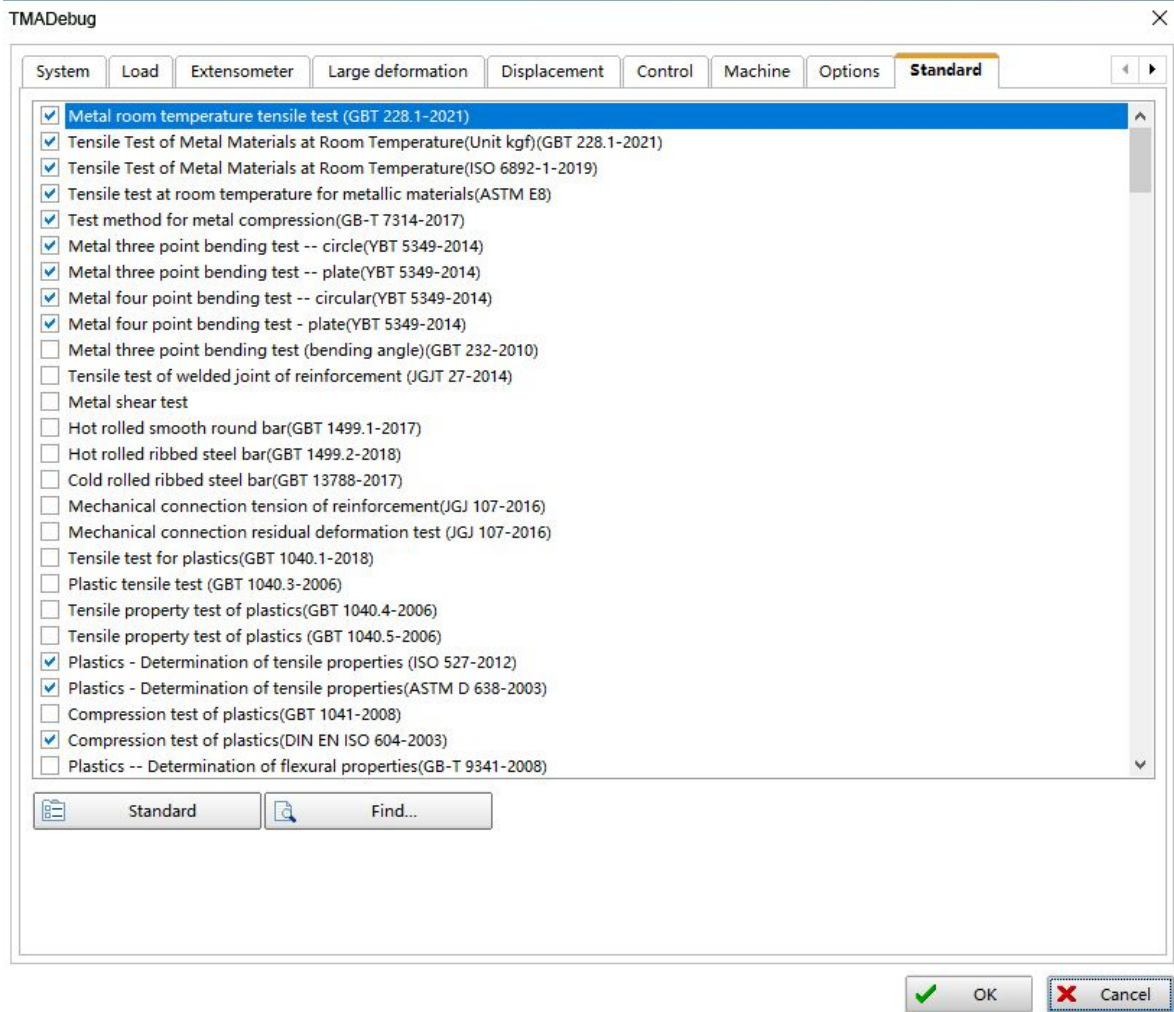
- It is designed with simple and attractive test interface and test data and curves can be recorded and displayed in real time.



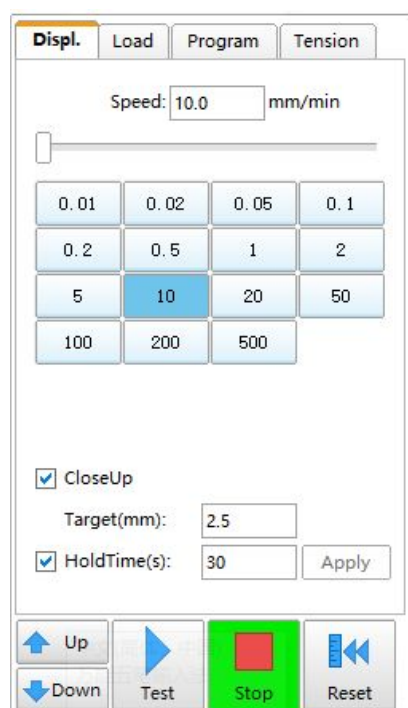
- It can support multiple load cells and extensometers.
- Users can select required test curves, such as Load-Displacement, Strain-Displacement, etc.



- The software fully compliance with the corresponding international standards like ISO, ASTM and BS EN etc. and also we can program your test standards into our software.



- It has different control modes and closed-loop control is feasible.



- Users can program test procedure as their own requirements.

TMAProgram

New Save Save as Delete Rename Add Step Insert Step Remove Step Config Quit

Control Program: Test 1

Step	Control Mode	Control parameters	Jump condition	Action	Loop	Remark
1	OpenDisplacement Control	Speed:5 mm/min,Down	When Load Reaches To 0.001 kN			
2	Load Control	Speed:0.002 kN/s,Target:2 kN, Prespeed:5 mm/min	When Hold Time Reaches To 30 s	Null		
3	OpenDisplacement Control	Speed:5 mm/min,Down	When Displacement Reaches To 2.5 m	Record load		
4	OpenDisplacement Control	Speed:5 mm/min,Up	When Displacement Reaches To 0.01 m	Displacement clear	Return 20 Times,Return To Step 0	
5	Stop					

Step1

Open Control, Speed: 5 mm/min, Direction: Down
Load Reach 0.001 kN Jump to <Step2>
Action: Notes Load

Step2

Load, Speed: 0.002 kN, Target: 2 kN, Prespeed: 5 mm/min
HoldTime Reach 30 s Jump to <Step3>
Action: None

Step3

Open Control, Speed: 5 mm/min, Direction: Down
Displacement Reach 2.5 mm Jump to <Step4>
Action: Notes Load

Step4

Open Control, Speed: 5 mm/min, Direction: Down
Displacement Reach 0.01 mm Jump, Action: Displacement Clear
Cycle 20 Times, Return <Step0>

Step5

Stop

- Users can edit test report by adding or delete items as their own requirements

Design report

Field in database

- scale factor
- Original gauge length(mm)
- Extensometer gauge length(n)
- Parallel length(mm)
- Final gauge length after fracture
- Percentage elongation after fracture
- Final size(mm)
- Reduction in area(%)
- Maximum force(kN)
- Tensile strength(Mpa)
- Upper yield force(kN)
- Upper yield strength(Mpa)
- Lower yield force(kN)
- Lower yield strength(Mpa)
- Specified plastic elongation f_{0.2}
- Specifies the plastic elongation f_{0.2}
- Modulus of elasticity(Gpa)
- Maximum force total elongation

Caption width 140 Data width 140 Row height 30

Top position 100 Table position 10

Item ☒ Head ☐ Foot ☐ Row

Name	Row	Head	Foot
BatchNo	No	No	No
SampleNo	No	No	No
TestDate	No	No	No
Tester	No	No	No
Size(mm)	No	No	No
Original gauge length	No	No	No
Maximum force(kN)	No	No	No
Tensile strength(Mpa)	No	No	No
Modulus of elasticity	No	No	No

Caption: Metallic Material Tensile Test Report

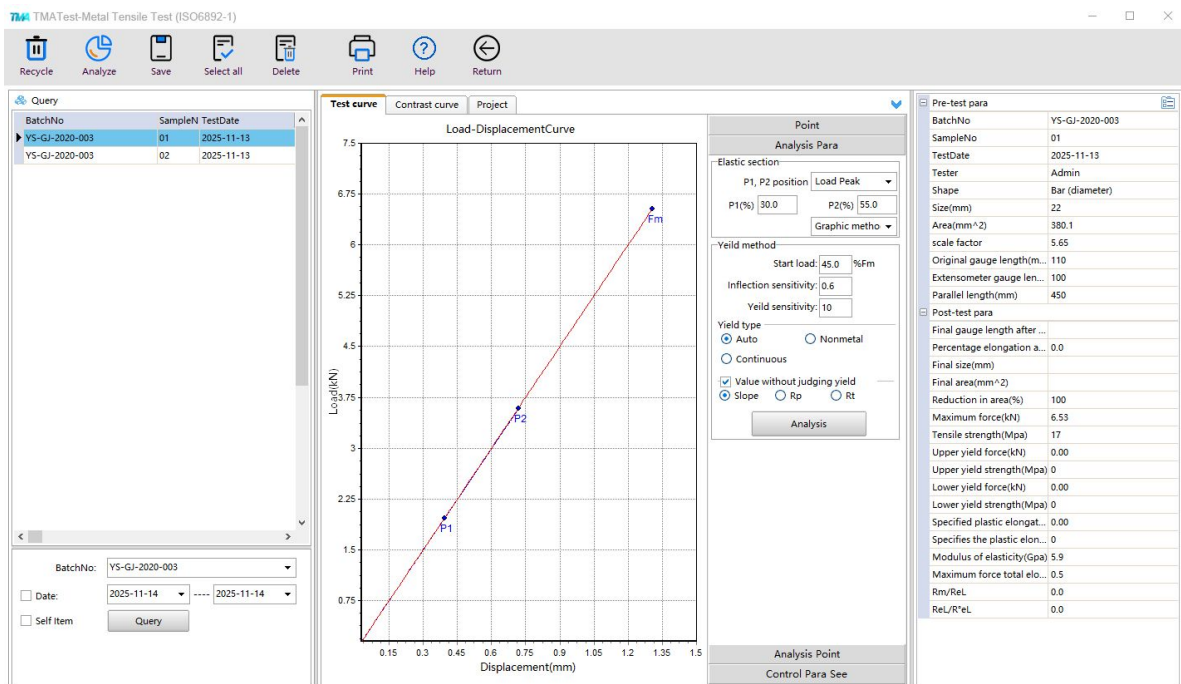
Sub caption:

☒ Print curve

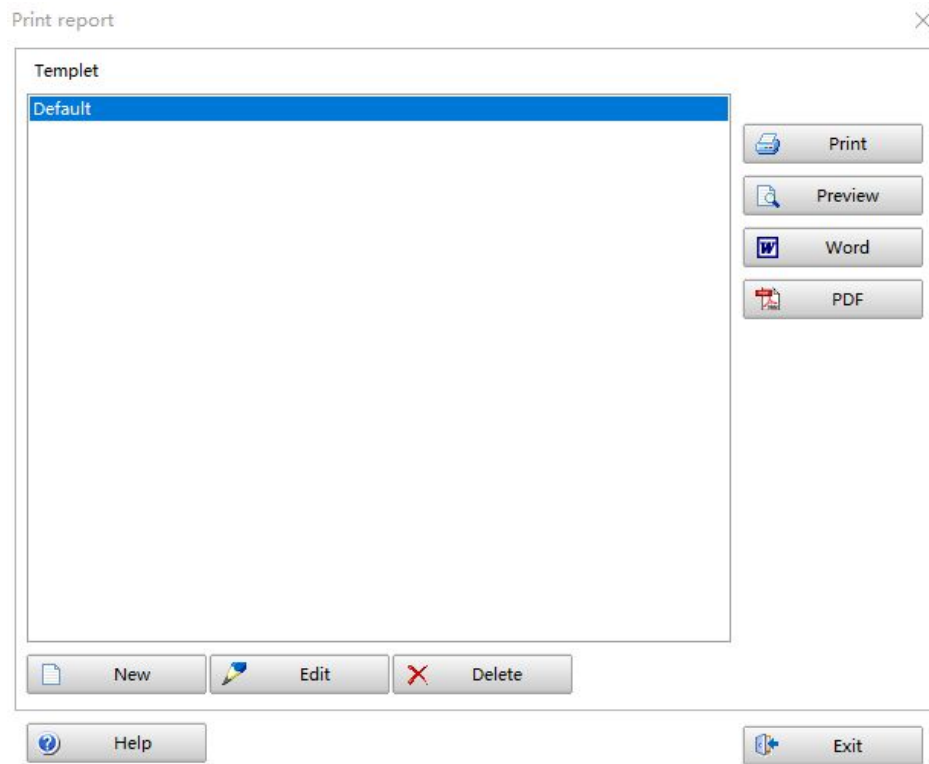
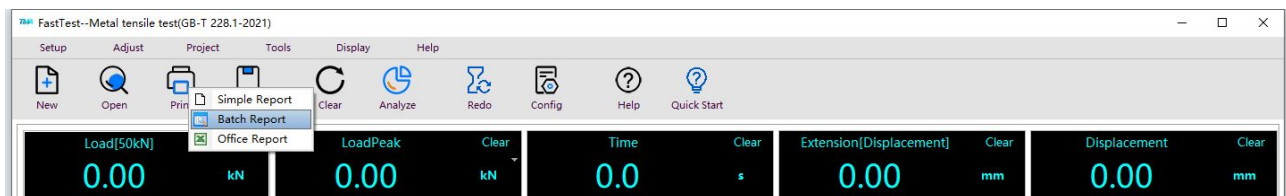
Caption: Load-Displacement Header position: Displacement(mm)

Sub caption: Load-Displacement Y caption: Load(kN) ☐ Point

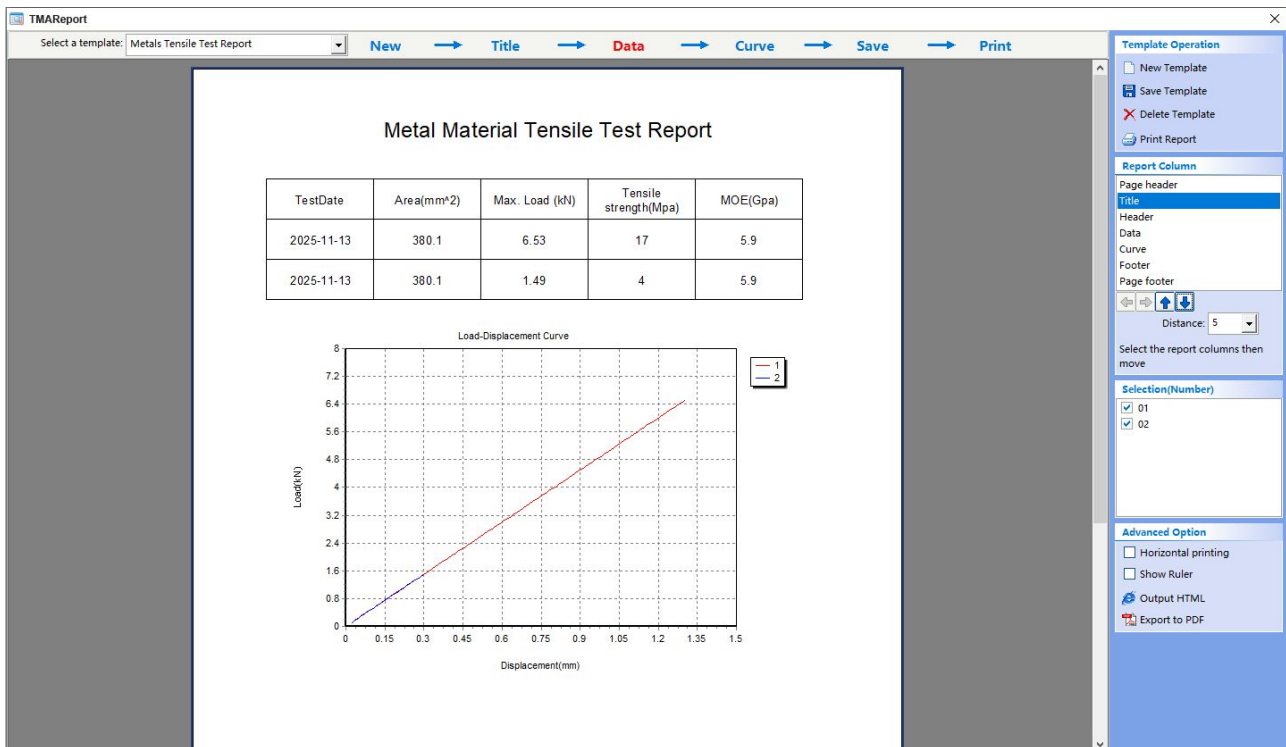
- Users can quickly inquire previous test data by using data inquiry module.



- Users can select test report template: single, batch or office.

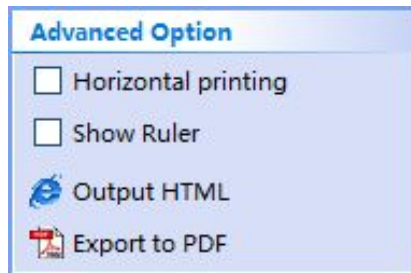


Single Report

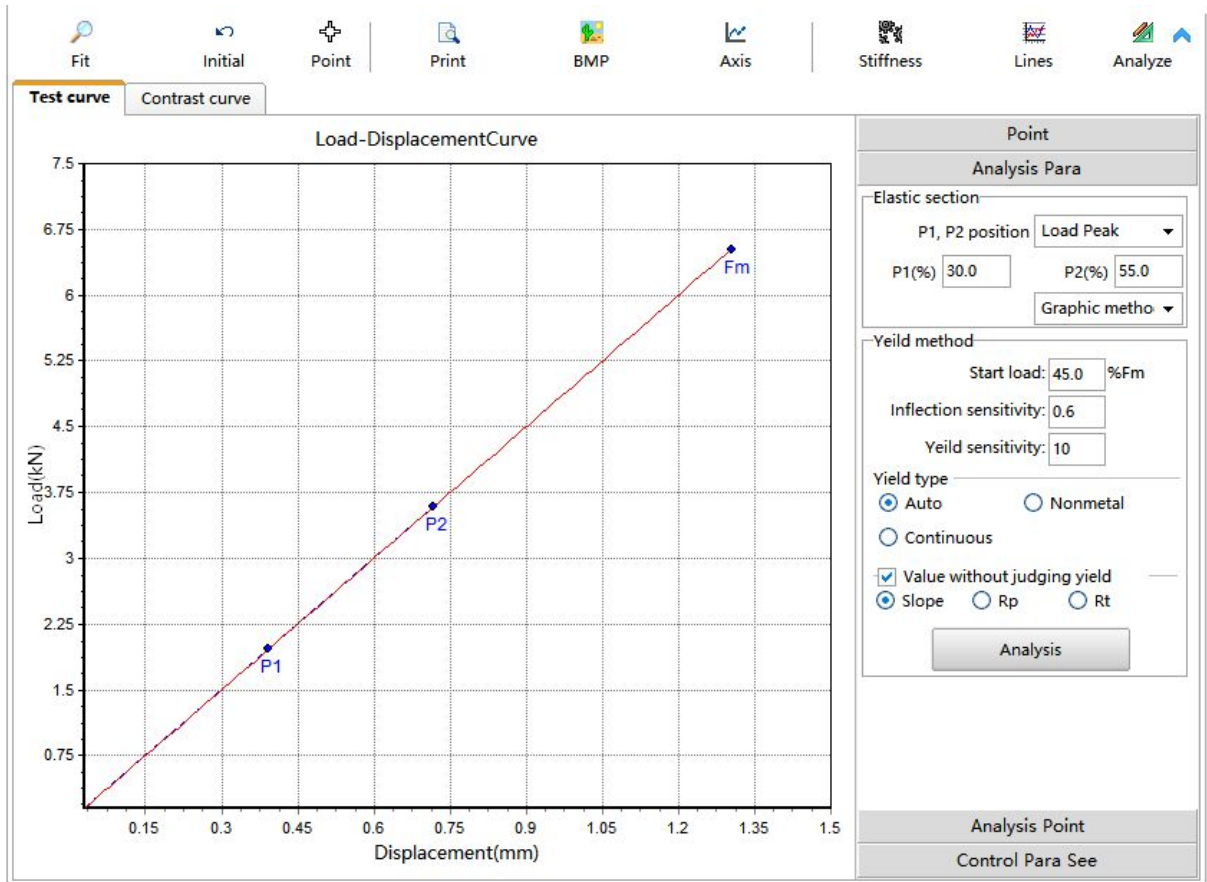


Batch Report

- Batch reports can be displayed in one paper and also can be output in PDF or HTML format.



- The software automatically figure-out routine data such as tensile strength, yield strength, modulus of elasticity, extend rate after rupture, non-proportional extend strength etc.



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