OPERATION MANUAL

WAW-300H Series Computer Display Hydraulic Universal Testing Machine

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1 Application

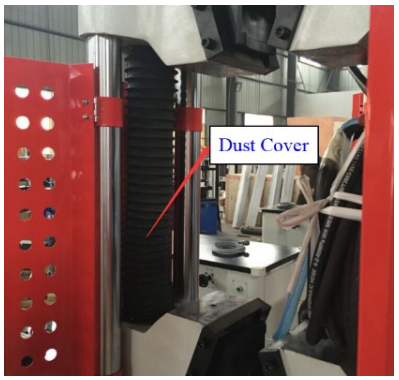
The machine adopts hydraulic loading, Computer Display, easy and convenient to operate. It is mainly used to execute the tension, compression, bending, flexural etc. test for metal materials. Attached with simple accessories and devices, it can be used to test wood, concrete, cement, rubber, and so on. It is very suitable for making test to different metal or nonmetal materials under high toughness and hardness against extreme big loading force.

2 Standards

ISO, ASTM, DIN, JIS, etc.

3 Host Features

Adopts that fuel tank is mounted under the host, tensile test space is located above the host, compression, and bending, shearing test space is located under the host, means between beam and worktable.
The structure is designed with solid four column and two screw, the whole machine has strong stability.
The host is designed all-inclusively to ensure its super strong stiffness so that it can resist micro-deformation when it is loading.
Middle beam adopts adjustable gap screw-nut mechanism, eliminating the gap and improving the measurement performance.
Fuel tank adopts gap sealed, improving the measurement accuracy and also extending service lifetime.
New design add the Protective Cover and Dust Cover, to protect the operator and the machine.



4 Overload Protection

When the test force exceeds 2%-5% of the maximum test force of each file, overload protection, it will stop.
When the piston rises to the upper limit position, travel protection, pump motor will stop.

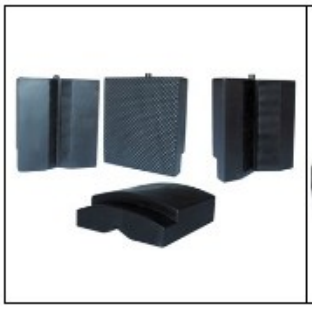
5 Main Specifications

Model	WAW-300H
Structure	6 Column (Four Columns Two Ball Screws)
Control Way	Constant Stress Uniform Deformation Constant Displacement, 3 Closed Loop And Program Control
Max.Load	300 KN (30 TONS)
Load Accuracy	≤± 1%
Load Range	2%~100%FS (6KN~300KN)
Load Resolution	1/300000
Deformation Measurement Range	2%~100%FS
Deformation Accuracy	≤± 1%
Displacement Resolution	0.01mm
Displacement Error	≤±0.5%
Max. Piston Stroke	200mm
Max. Piston Moving Speed	0-150mm/min Steeples Speed Adjusting
Crossbeams Lifting Speed	200mm/min
Max. Tension Test Space	800mm (Can Be Customized)
Max. Compression Test Space	650mm (Can Be Customized)
Center Spacing Between Columns	520mm
Column Effective Spacing	460mm
Clamping Method	Hydraulic Automatic Clamp
Round Specimen Clamping Range	Φ10-Φ20mm, Φ20-Φ32mm (Optional:Φ4-Φ10mm)
Flat Specimen Clamping Range	0-15mm (Optional: 15-30mm)
Flat Specimen Clamping Width	75mm
Flat Specimen Clamping Length	70mm
Compression Plate Size	Φ160mm
Bending Roller Distance	450mm
Width Of Bending Rollers	120mm
Intensify Equipment Form	Built Intensify

Crossbeam Lifting Method	Nut Rotating
Mechanical Strength	Strength Of 3.5 Times
Power Supply	3-phase,AC380V, 50Hz (Can Be Customized)
Host Weight	1300.00 KG
Host Size (L*W*H)	925*550*2043mm

6 Standard Configuration

Four columns two ball screws oil cylinder down-setting high strength host-1 set
Testing machine special tensile fixture-1 suit
WAW-300H: Round: Φ10-Φ20mm, Φ20-Φ32mm (Optional: Φ4-Φ10mm);
Flat: 0-15mm (Optional: 15-30mm)
Testing machine special compression fixture (Φ160mm) -1 suit
Testing machine special bending fixture-1 suit
Testing machine special shear fixture (Optional)-1 suit



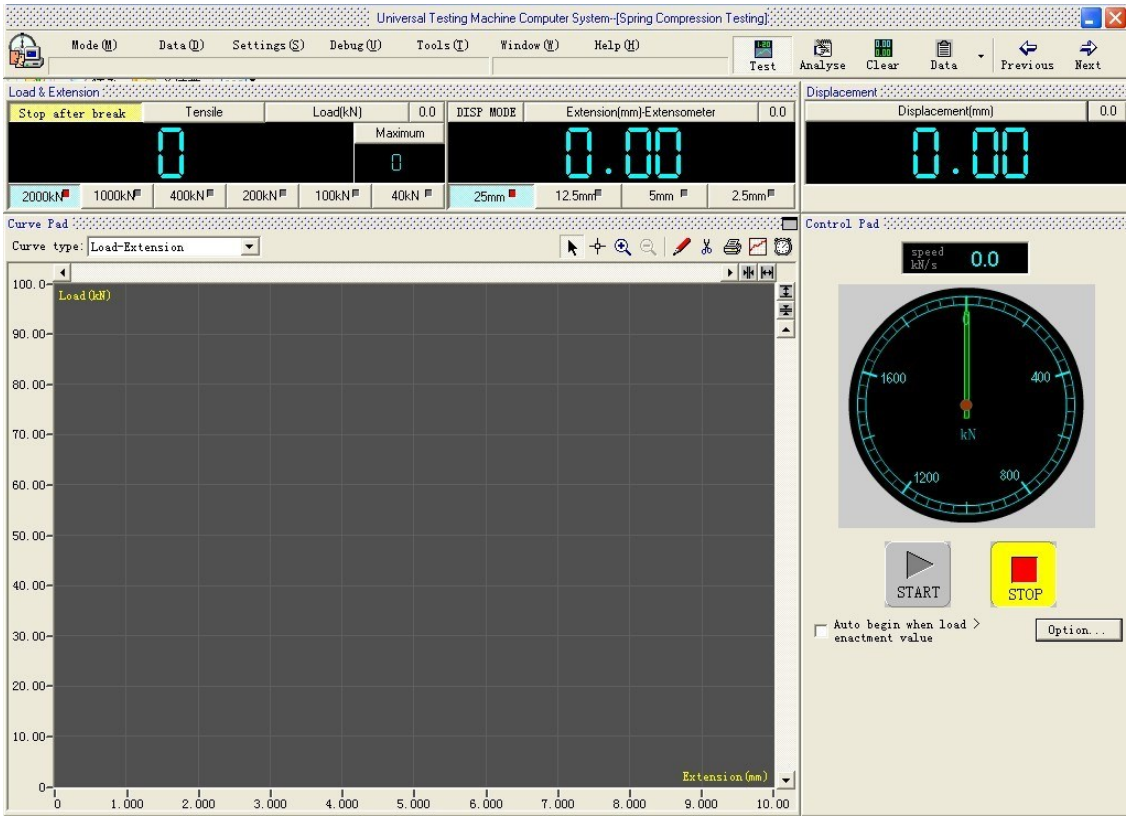
Oil source control cabinet-1 set
Italy imported Marzocchi gear meshing pump--1 set
“WNM” Motor-1 set
Reversing solenoid valve for hydraulic clamp device-2 pcs
Relief valve for hydraulic clamp device-1 pc
One-way valve-1 pc
Precision oil filter-1 pc
Constant pressure difference send oil valve-1 pc
Closed type oil return valve-1 pc
Harp oil source control cabinet -1 set

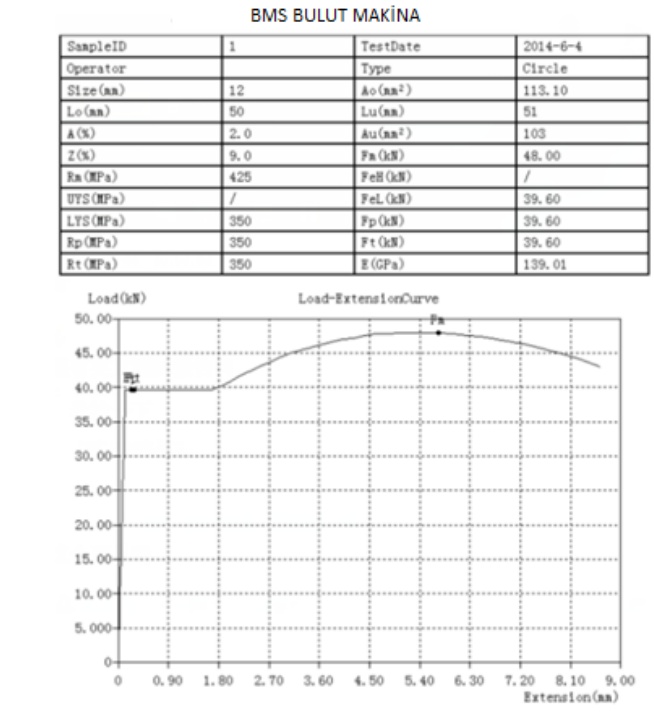
Specialized measure and control system-1 suit
High precision displacement testing device-1 suit
High accuracy sensor-1 pc
YSJ50/10 high precision electronic extensometer-1 pc
Lenovo computer-1 set
HPA4 color ink-jet printer-1 set
Testing machine special measurement and -1 set

7 Software Function and Features

Defined function: According to different types of users, different material properties, different test standards, different languages, flexible setting the test program to meet the test requirements.
Input Function: Entry specimen parameters before the test, you can single input sample parameter, you can also batch input sample parameters, you can modify the sample parameters before the test, the specimen parameters can be modified after the test, fully satisfy your operating habits.
In metal tensile test, Can automatically obtain Fel、Feh、Fp、Ft、Fm、Rel、Reh、Rp、Rt、Agt、Z、A、Rm, etc, also can carry on the artificial recognition of for Fel, Fm, etc. and print the results accordingly. Can print different content of the report and curve according to the need.
Testing standard: The program use the open database structure, integrating national, ISO, ASTM, JIS, DIN and other test method, also can customize as request; Can configure multiple sets of force sensor and extensometer, the user can switch at any time according to need.

Data processing query functions: Fully equipped data query function, print function, the export function to ensure the accuracy of the test data, reliability, real embody and reflect the nature and characteristics of the material test data.
Curve point traversal functions: Through the mouse click on the curve of force and deformation values, to obtain various parameters of each point.
Curve selection function: Force-time, deformation-time, force-deformation, and force-displacement four curves can be selected according the necessity to display and print; and we can switch observation at any time, any zoom (zoom in or zoom out), move it horizontally or vertically, and high-speed sampling at real-time.
Auto saving: Adopting the database management way, the test data and curve automatically saved after the test.
Automatic analysis: Finish test, the system automatically analysis, statistical test results.
Test report: According to user required format to compile reports and can print bulk data.





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SampleID	1	TestDate	2014-6-4
Operator		Type	Circle
Size(mm)	12	Ao(mm²)	113.10
Lo(mm)	50	Lu(mm)	51
A(%)	2.0	Au(mm²)	103
Z(%)	9.0	Fm(kN)	48.00
Rm(MPa)	425	FeH(kN)	/
UYS(MPa)	/	FeL(kN)	39.60
LYS(MPa)	350	Fp(kN)	39.60
Rp(MPa)	350	Ft(kN)	39.60
Rt(MPa)	350	E(GPa)	139.01

Control Way:
Contains a variety of control methods, one of these is single-step program, including many closed-loop control ways, such as constant stress, constant strain, constant displacement, displacement and force maintained etc. .