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 yie deformation, elong	eld point, Max loa gation rate, elastic	d point, testing module & Rp0.2	load of breakin .etc.	g point, stress,
Flat Specimen Clamping Thickness	0—15mm	0—15mm	0—30mm	0-40mm	0—60mm
Round Specimen Clamping Diameter	Ф6—22mm	Ф9—32mm	Ф13—40mm	Ф20—60mm	Ф30—80mm
Max. Compression test space (Excluding test bench)(mm)	192	630	630	680	850
Size of compression plates	Ф125mm	Φ120mm	Ф120mm	Ф150mm	Ф200mm
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	1(00	150/200	
Load accuracy (%)		±0.5%	/ ±1%		
Tensile space		350	mm		
Piston stroke		200	mm		
Load speed		0.5-100	mm/min		
Return speed		100m	m/min		
Compression space		600	mm		
Distance between columns		360	mm		
Tensile grip	Round: Ø4-20mm Flat: 0-21mm Round : 9-26mm Flat: 7-21n				
Compression platen		Ø10	Omm		
Dimensions		750x510>	(1610mm		
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	5%/±1%		
Max. Tensile space(mm)	600	600	700	800	
Max. Compression	200	200	450	500	
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	520	600×350	660v400	900v450	
columns(mm)	520	000x350	000x400	8008430	
Round insert(mm)	Ф10-32	Ф13-40	Ф13-60	Ф10-70	
Flat insert(mm)	0-15	0-30	0-40	0-60	
Compression platens	Ф120mm	Ф150mm	Ф150/204x204mm	Ф200/204x204mm	
Accuracy of deformation		±0.5	5%/±1%		
Dimensions of load	<u>990v620v2090</u>	880v620v2080	090x720x2520	1000,000,04100	
frame(mm)	0000000000000	000703072900	90027202030	1220200024100	
Weight(kg)	2500	3000	5000	8000	

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	30	00	600	D	1000		2000
	0-10	0-20	0-	60	0-12	20	0-200		0-500
Measuring range (kN)	0-25	0-50	0-1	50	0-30	00	0-500		0-1000
	0-50	0-100	0-3	300	0-60	00	0-1000		0-2000
Load accuracy		•			≤±1.0%	, D		<u>.</u>	
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—1 5	60/0—1 5	60/0—1 5	60/0—1 5	60/0—30	60/0—30	120/0—40	60/0—55	120/0—5 0
Round Specimen Clamping Diameter (mm)	Ф3—14	Ф6—22	Ф10—3 2	Ф10—3 2	Ф13—40	Ф13—40	Ф13—60	Ф12—60	Ф15—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	Ф125m m	Ф125 mm	Ф120 mm	Ф120 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	610x700	610x70	1250x660	900x60 0x 2550	1255x660	1100x120	1250x900	800x1320	1510x104
	A 2100	07 2100	A20 01	07 2000	10200	0 12000	10000	10100	5 147 00

Hydraulic Universal Testing Machine

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

Extensomter

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



Long Travel Extensometer



Extensometer for round specimen



for flat specimen



Laser extensometer



Axial extensometer



Transverse and axial extensometer

Video extensometer

r&n value extensometer

High temp. extensometer



Full automatic extensometer





Wireless controller



Testing Fixtures for Different Tests



(TE)









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.

Option	Test Standards	Remote Conta	roler
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VAC Drive	r: 40		
Application Titl	e:		
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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.

Mode(M)	Data(D)	Settings(<u>\$</u>)	Debug(<u>D</u>)	Tools	Window(W) Test Analyse	Help(H) Clear) Data	•	Previous	Next	
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urve type Load	Metallic mat	erials-Sheet and	1 strip-Determi	nation of terr	ile strain harden	ing expose	et/ISD 10	2751			
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	Metallic mat	erials-Tensile te	isting at ambie	nt temperatu	re(50-9892)						

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.

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Speed 0.500 MVs E.00 MVs/s I Lood 33/s	Program: [Lidujisza] Refrech Cete Fact Step 3) Gates 12 Insplacement Cettral, goed Sme/sin, Larget (Des. Cettral, goed Sme/sin, Larget (Des. Then Laid reaches 2 M gate (ates 2)	The left graph is a typical curve of metalic materials for tendle test (force-Extension Curve). The whole control of the steps of the ste	The first size Tighten speed Sme/ain. Firess Speedil WW's Switch to the second step after the first descend De second step
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Through the Tensile Program Editor, user can setup test steps according to the requirment of standards.

Hydraulic Universal Testing Machine

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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.

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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.

Select	ОК
20km	Cancel
C 100kN	
C 300kH	

TE software supports four load cells.