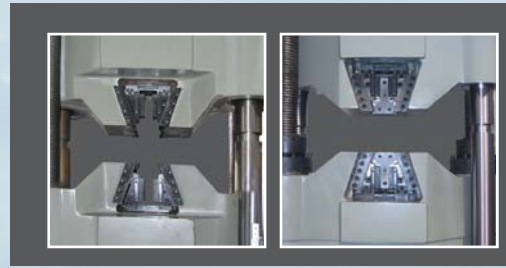


## Main Applications:

WAW Series machine, compared with a ball screw type electric mechanical UTM, is adopting oil hydraulic power to push the piston in the oil cylinder to provide loading force. Therefore it is very suitable for making test to different metal or nonmetal materials under high toughness and hardness against extreme big loading force. By using oil pressure transducer and photoelectric encoder, the computer is timely collecting the testing parameters like loading force, stroke etc. The servo system will provide on line close loop control and constant parameters control. The test software is able to create customized testing methods and setup testing report in only a few steps. WAW series is widely used in different inspection department, engineering area, universities and institutes.



### GRIP JAW TYPE

Optional "open" (C type) or "semi open" (Y type) type grip jaw. Suitable for different test intensity.

### UPPER CROSSHEAD

Upper crosshead position can be adjusted according to the length of test samples.

### AUTO HYDRAULIC GRIP

Independence wedge action hydraulic grip, firmly hold the samples. Secure the safety and reliability during tensile tests.

### LOWER CROSSHEAD

Lower crosshead is driven by motor and gear to make it move up and down to preset gripping distance.

### TEST SPACE

Adopts double test space; use upper test space to make tensile tests, use lower test space to make compression tests.

### OIL CYLINDER

Refined high precise oil cylinder secure the stability of load and accuracy of test results.



### ELECTRIC CABINET

Electromagnetic proof cabinet, improve the reliability and stability of the whole electric system.

### TIME-SHIJIN Controller

Plug In ready to use PCI control card, suits all kinds of personal computer and main board. Full digital measure and control circuit provided with Load, displacement & deformation different measuring channel. Close loop control by simply software configuration.



## WAW-1000C



CALIBRATION REPORT FROM NACIS FOR WAW SERIES TESTING SYSTEM

# WAW Series Servo Hydraulic Universal Testing Machine

## Features:

Full computer controlled of testing process.

Adopt oil-hydraulic automatic clamps which can be operated from separate control box.

Wedge tension jaw processed by advanced technology; increase the stiffness of crosshead under high load and high intensity tests.

Powerful multifunctional control software will provide more testing methods to meet ASTM, ISO and other testing standards.

Report Guide will create your testing report in only three steps.

Programable testing software makes LCF testing or cyclic testing become available.

Overload protection will secure operators.



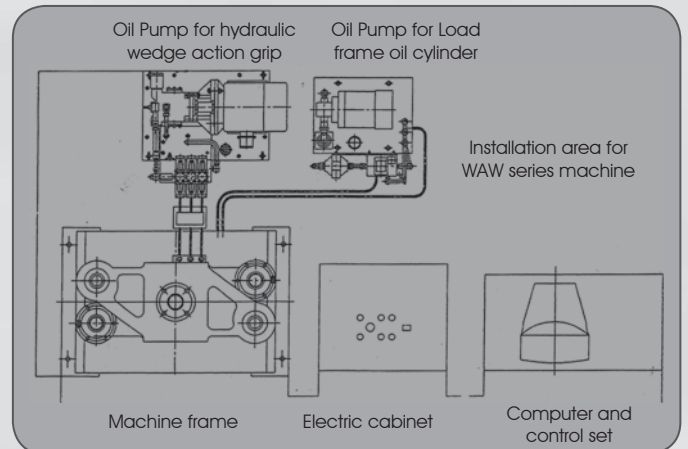
WAW-50A/100A



WAW-1000A



WAW-2000A



Main Technical Specifications:

Specification	WAW-100A	WAW-100C	WAW-300C	WAW-300A	WAW-500C	WAW-600C	WAW-600A	WAW-1000C	WAW-1000A	WAW-2000A
Load range	2%-100%FN ,no rank or Simulation ranks. Optional resolution: 1/1000 or 1/2000 (EDC controller) or 1/2000000									
Piston stroke (mm)	250	150	250	300	250	300	300	250	250	
Measure of stroke (mm)	0.01									
Test space (include piston stroke) (mm)	Tension	600	580	600	900	600	600	600	780	850
	Compression	355	500	550	800	550	300	540	650	720
Overall dimension (mm)	2560 x 2200 x 2750	2560 x 2200 x 2040	2600 x 2200 x 2350	2600 x 2000 x 2987	2760 x 2200 x 2633	2760 x 2200 x 2633	2600 x 2000 x 3290	3020 x 2200 x 3070	3020 x 2000 x 4000	3280 x 2200 x 4700
	Tension	395	435	530	590	650	580	760	675	900
Distance between columns (mm)	Compression	255			380		370		490	690
		1250	1500	2300	2200	3000	2900	6800	5000	10400
Load frame net Weight (kg)	100	100	300	300	500	600	600	1000	1000	2000
Accuracy of test load	± 1%									
Attenuation of deformation amplifier	1,2,5,10									
Max griped width of flat specimen (mm)	70	70	70	70	80	80	80	70	125	140
Griped thickness of flat specimen (mm)	0-15	0-15	0-15	0-15	0-30	0-30	0-30	0-55	0-40	0-50
Griped dia of round specimen (mm)	Φ6-Φ22	Φ6-Φ22	Φ10-Φ32	Φ10-Φ32	Φ13-Φ40	Φ13-Φ40	Φ13-Φ40	Φ12-Φ60	Φ13-Φ60	Φ10-Φ70
Dimension of compression plates (mm)	Φ125	Φ125	Φ130	Φ120	204x204	Φ120	204x204	204x204	204x204	204x204
Span of bending support (mm)	600	350	350	100-1000	600	600	1000	100-800	1000	800
Length of the bending roller (mm)	100	100	140	140	140	140	140	140	140	140
Max bending flexibility (mm)	80	80	100	100	100	100	100	150	150	190
Dimension of specimen for shear (special order)	10	10	10	10	10	10	10			
Power of the pump motor (kw)	1.5	3	3	3	3	3	3	3	3	7
Device of measuring deformation	Electronic Extensometer									
Relative error of deformation measuring	± 0.5% or ± 1%									
Crosshead adjust structure (Means of transmission)	Common motor worm gear drive	Disc motor worm gear drive	Common motor worm gear drive	Common motor worm gear drive	Disc motor worm gear drive	Common motor worm gear drive	Common motor worm gear drive	Disc motor worm gear drive	Common motor worm gear drive	Common motor worm gear drive
	760 x 500 x 2040	1100 x 1200 x 2633	1250 x 560 x 2987	1250 x 560 x 2987	1100 x 1200 x 2633	1100 x 1200 x 2633	1255 x 660 x 3290	1320 x 800 x 3070	1255 x 866 x 4000	1510 x 1040 x 4700
Safety protection	Software overload protection and mechanical limit switch									
Overload protection rate	2%-5%									
Software	TIME SHIJIN software									
Dimension of load frame (include piston stroke) (mm)	610 x 700 x 2750	760 x 500 x 2040	900 x 600 x 2350	1250 x 600 x 2987	1100 x 1200 x 2633	1100 x 1200 x 2633	1255 x 660 x 3290	1320 x 800 x 3070	1255 x 866 x 4000	1510 x 1040 x 4700
Dimension of control cabinet (mm)	600 x 400 x 960									
Speed of stroke (mm/min)	≥ 70 (or control by the software)									
	≥ 50 (or control by the software)									

# WEW Series Computer Display Hydraulic Universal Testing Machine

## Features:

WEW Series machine is adopting oil hydraulic power to push the piston in the oil cylinder to provide loading force. It is very suitable for making test to different metal or nonmetal materials under high toughness and hardness against extreme big loading force. By using load transducer and photoelectric encoder, the computer is timely collecting the testing parameters like loading force, stroke etc. This machine is adopting manual control mode and computer collecting and displaying methods to process the testing parameters. The software based on Windows system is able to make automatic calculating of test results, i.e. tensile strength, up / low yield strength, Non proportional stress point etc. Report creation function makes it is very simple to make testing report in needed format. This machine is widely used in different areas and facilities.

### CROSSHEAD MOVING

Crosshead is directed by reeling screw column. So that to meet different length of specimen.

### FRAME STRUCTURE

High intensity 4 columns structure load frame. Very stable and reliable during high force tests.

### COMPRESSION TEST

Adopt double-test-space, easy to achieve tensile test and bending test at the same time.

### STROKE CALCULATE

Crosshead displacement is counted by a scale or software through photoelectric encoder (OPTIONAL)

### OIL CYLINDER

Oil cylinder is put at the bottom to reduce unnecessary machine height.

### THE GRIPS

Auto Wedge Clamp, firmly hold the specimens. Convertible grip will fit for different kinds of specimen.

### OIL CONTROL CABINET

Two handwheels manually control the inlet and outlet quantity of oil to apply load on samples.

### DIGITAL DISPLAY & RESULT OPERATION

TIME SHIJIN Controller directly collect testing data, fast results process and display.



## WEW-1000D

### Features:

- ◆ Full computer displayed of testing process.
- ◆ Manual loading speed will meet your appropriate testing speed.
- ◆ Adopt manual / oil-hydraulic automatic clamps which can be operated from separate control box.
- ◆ Timely control software will provide accurate record of testing process.
- ◆ Report guide will create your testing report very simply.
- ◆ Overload protection will secure operators.

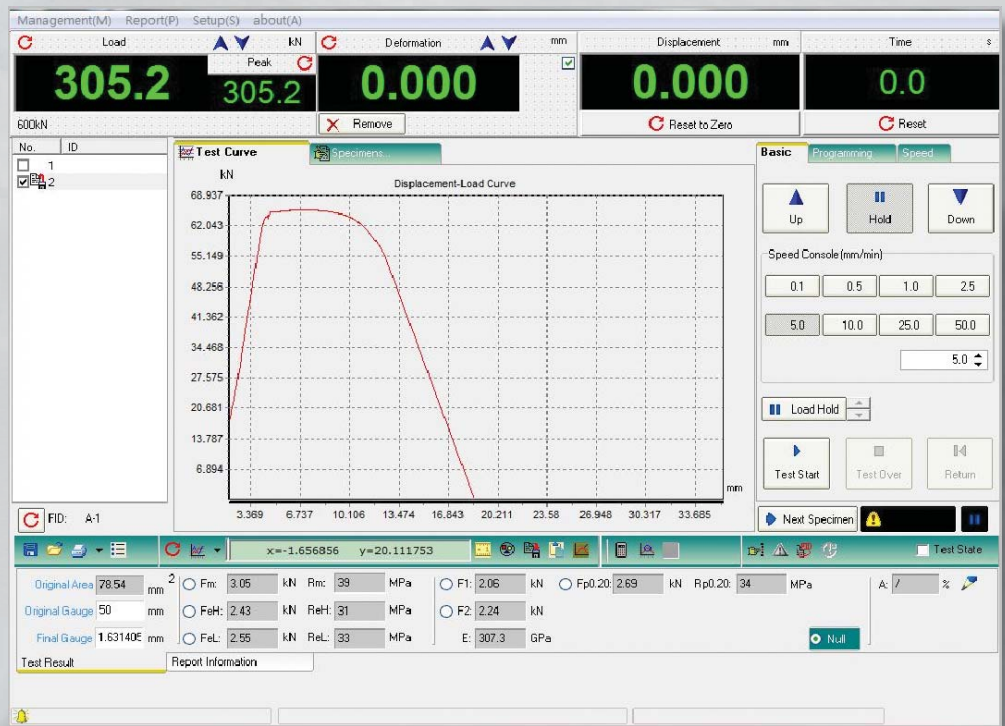
## Main Technical Specifications:

Specification Model	WEW-50A	WEW-100A	WEW-100C	WEW-300A	WEW-300C	WEW-300D	WEW-600A	WEW-600C	WEW-600D	WEW-1000A	WEW-1000C	WEW-1000D	WEW-2000A
Max. load(kN)	50	100	300	600	1000	2000							
Attenuation of load amplifier	Stepless, equivalent 3 scales												
Accuracy of test load	Stepless, equivalent 4 scales												
Accuracy of deformation	< ± 1%												
Scope of deformation measure	< ± 1%												
Grip Dia. of round specimen (mm)	2%-100% of the full scale of the extensometer												
Grip Thickness of flat specimen (mm)	Φ3-Φ14	Φ6-Φ22	Φ10-Φ32	Φ10-Φ32	Φ10-Φ32	Φ10-Φ32	Φ13-Φ40	Φ13-Φ40	Φ13-Φ40	Φ13-Φ60	Φ12-Φ60	Φ13-Φ60	Φ15-Φ70
Max distance between grips (include piston stroke) (mm)	0-15	0-15	0-15	0-15	0-15	0-15	0-30	0-30	0-30	0-40	0-55	0-40	0-50
Space for compression (mm)	0-355	0-500	0-300	0-300	0-550	0-500	0-300	0-550	0-450	0-650	0-800	0-470	0-720
Columns distance (mm)	Tension 395	395	590	590	530	460	580	650	515	675	760	565	900
	compression 255	255	380	380			370			490			690
Attenuation of deformation amplifier	1,2,5,10												
Max grip width of flat specimen (mm)	70	70	70	70	70	70	80	80	80	125	70	125	140
Dimension of compression plates (mm)	Φ125	Φ125	Φ120	Φ120	Φ130	Φ120	204x204	Φ120	204x204	204x204	Φ160	204x204	204x204
Span of bending roller (mm)	600	600	1000	1000	350	350	1000	800	800	1000	800	800	800
Length of bending roller (mm)	100	100	140	140	140	140	140	140	140	140	140	140	140
Max bending flexibility (mm)	80	80	100	100	100	100	100	100	100	150	150	150	190
Dimension of specimen for shear (mm)(Optional accessory)	10	10	10	10	10	10	10	10	10				
Power of pump motor (kw)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	7
Power of crosshead motor (kw)	0.55	0.55	0.75	0.75	0.37	0.37	0.6	1.1	0.6	0.6	3	0.6	2.2
Measuring device of deformation	Extensometer												
Crosshead adjust structure (Means of transmission)	Ordinary motor worm gear drive	Disc motor worm gear drive	Ordinary motor worm gear drive	Disc motor worm gear drive	Ordinary motor worm gear drive	Disc motor worm gear drive	Ordinary motor worm gear drive	Disc motor worm gear drive	Ordinary motor worm gear drive	Disc motor worm gear drive	Ordinary motor worm gear drive	Disc motor worm gear drive	Ordinary motor worm gear drive
Safety protection	Limited switch												
Overload protection rate	2%-5%												
Software	TIME SHIJIN Software												
Dimension of mainframe (include piston stroke) (mm)	610x700x2150	610x700x2150	900x600x2040	1260x560x2987	1100x200x2350	740x550/145	1000x700x3290	1100x1200x2633	1255x660x2205	800x1320x4000	1320x800x3070	125x666x2510	1510x1040x4700
Dimension of the control cabinet (mm)	610x700x1100												

## SOFTWARE MAIN INTERFACE

Integrate design of main control interface could realize the machine control, digital display, diagram display and test results process at the same time. MS windows based core program, easy and fast to reach different functions.

Be suitable for **WAW**, **WEW** and **YAW** series Hydraulic testing machine.



WINWAW software interface

## FULL SOFTWARE CONTROL (WAW and YAW series capable only)

### STROKE CONTROL

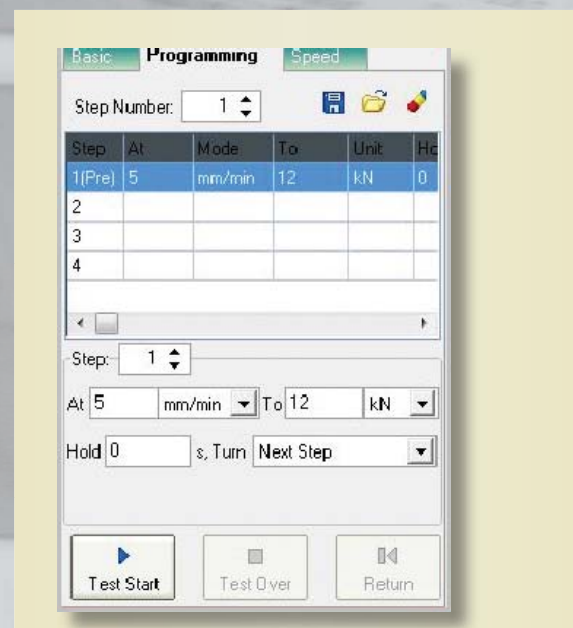
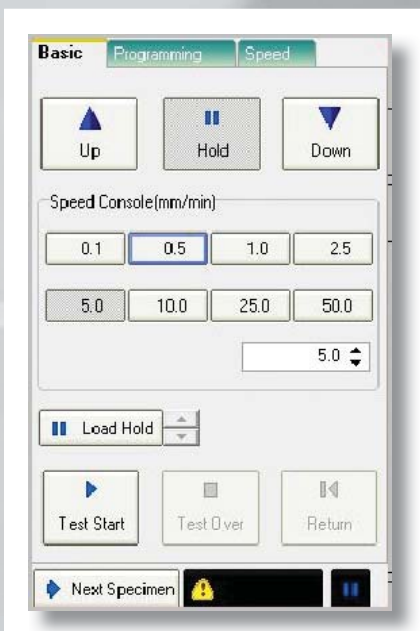
User can define a customized test speed to make tensile, compression or other tests.

The speed is adjustable through this control panel.

### PROGRAM CONTROL

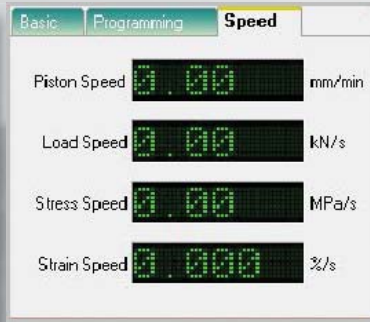
User can input programming conditions to regulate test process. Suitable for bulk test conditions and cyclic tests.

100 steps programs available.

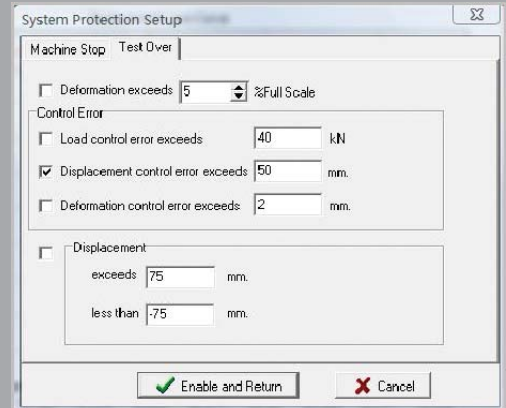




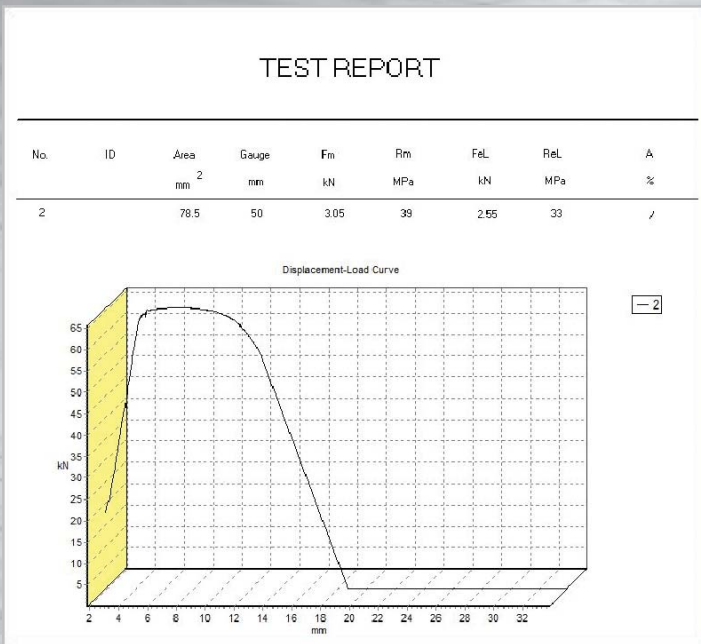
Multilevel authorization access



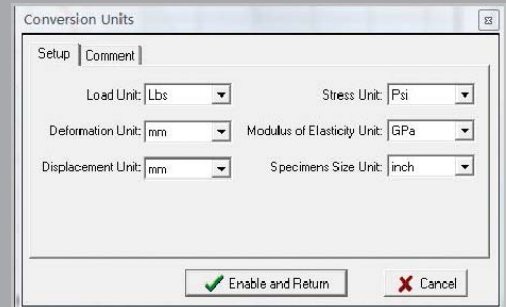
Test speed timely display



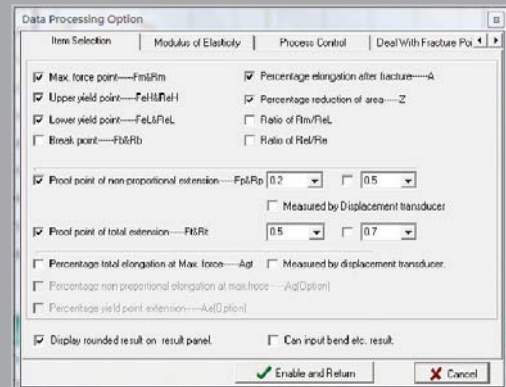
Over load protection and stop after condition



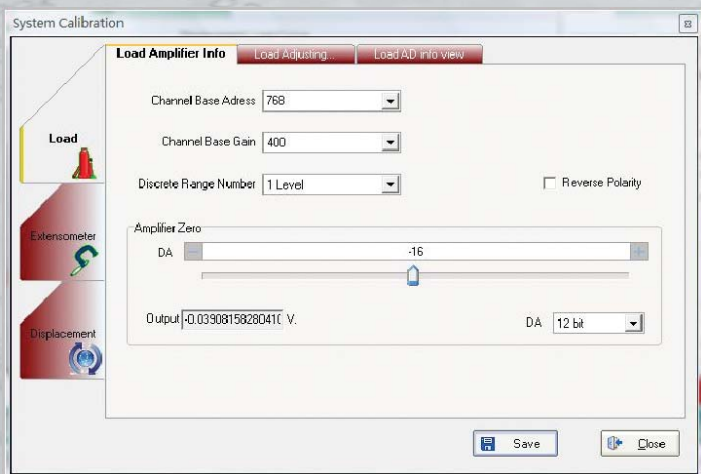
Fast test report creation



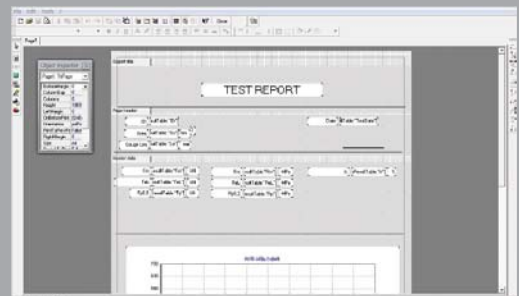
International test unit exchange



International standard test results process methods input



Easy software calibration



Customized test report edit