

# **Computer-Controlled Electro-hydraulic Servo Universal Testing Machine**

**Brand: JNG**

**Model: JG-2000E**

**Capacity: 2000kN**



**(Photo for reference only)**

## Application

JG-2000E Computerized Servo Hydraulic Universal Testing Machine is suitable to test various metallic & non-metallic materials for tension, compression, bending and shearing strength. It is 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 per the set program and can draw test curves automatically in real time.

## Types of Specimens and Materials

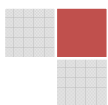
- Metals-(wire, rod, tube, strip, plate, strip); Fasteners (tensile, proof, single and double shear); Construction materials (reinforcement bar, wire, mesh, folding, compression of concrete and components), etc

## Application Standard

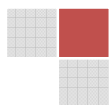
- Load meets or exceeds the following standards: ASTM E4, ISO7500-1, EN 10002-2, BS1610, DIN 51221.
- Strain measurement meets or exceeds the following standards: ASTM E83, ISO 9513, BS 3846 and EN 1000.

## Specifications












Model	JG-2000E
Max. load (kN)	2000
Structure	Six columns (4 columns and 2 screws)
Control way	Constant stress uniform deformation constant displacement three closed loop control and program control dealing
Load accuracy	Class 0.5











Relative error of reading	±0.5%
Load range	2% ~ 100%FS
Load resolution	1/500000
Deformation measurement range	2% ~ 100%FS (Full scale)
Deformation accuracy	≤±1% / 0.5
Displacement resolution	0.001mm
Displacement error	≤± 0.5%
Testing speeds (mm/min)	0.1 ~ 70
Max. piston stroke (mm)	250
Max. speed of piston without load (mm/min)	70
Max. speed of beam adjustment (mm/min)	350
Max. Tension Test Space (mm)	1250
Max. Compression Test Space (mm)	850
Column Effective Spacing	800
Diameter of column (mm)	Ø100
Clamping method	Hydraulic Automatic Clamp
Round insert (mm)	Ø 15 ~ Ø 30, Ø 30 ~ Ø 55, Ø 55 ~ Ø 70
Flat insert (mm)	10 ~ 40
Flat specimen clamping width (mm)	150 * 120
Compression Plate Size	Ø 160mm
Bending Roller Distance	450mm
Width of Bending Rollers	120mm
Power Supply	5kW, 3-phase, AC380V, 50Hz / 220V / 60Hz (Can be customized)
Dimension of load frame (mm)	1100 x 850 x 3135
Dimension of power package (mm)	1200 x 680 x 750
Weight (kG)	5830kg

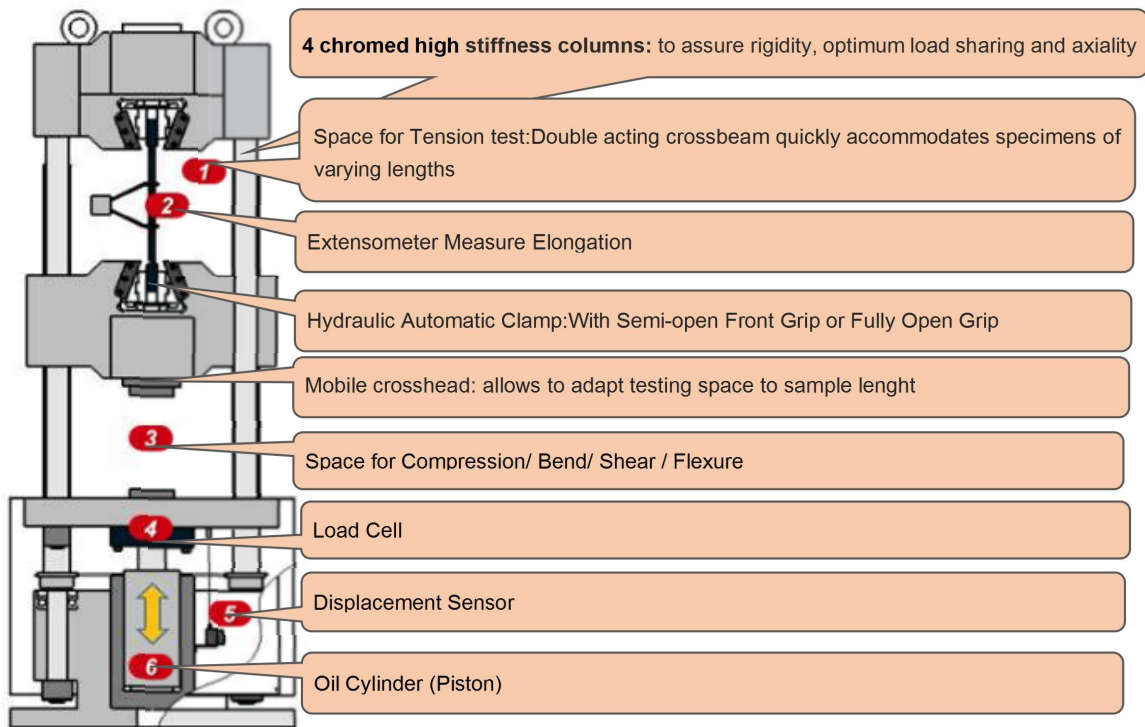


## Standard Accessories

Name		Description	Quantity	
High strength Main Frame		4 columns and 2 ball; High intensity testing machine structure and crosshead, high stiffness to assure accuracy	1 set	
Hydraulic Automatic Wedge Tensile Grip (1 set for each)	Round Specimen	Ø 15 ~ Ø 30, Ø 30 ~ Ø 55, Ø 55 ~ Ø 70,	Each 1 set	
	Flat Specimen	10-40	1 set	
Compression Test Attachment		Dimension: Ø 160mm	1 set	
<b>Power Package</b>				
Control Cabinet		Constant stress uniform deformation constant displacement three closed loop control and program control dealing	1 set	
Electro-hydraulic servo valve		Germany-HYTOS	1 set	
Moter		WNM, 2.2kW	1 set	
Oil Pump		ITALY `MARZOCCHI` pump	1 set	
Plug-in valve		USA SUN	1 set	
Pressure Monitoring Meter			2 set	
Equipped Monitoring system			1 set	
Magnetic Exchange Valve		Hydraulic 24V	3 set	
Oil Delivery and Return Valve			1 set	

Measurement and Control Part			
Load Sensor	USA Spoke Shape Load Cell	1 set	
Photoelectric Encoder		1 set	
Electronic Extensometer	Standard gauge: 50mm Deformation: 10mm	1 set	
Hand-held controller		1 set	
External Independent Controller	EDCH 550	1 set	
English Operative Software	HKTEST 4.0: Language English	1 set	
Computer	Branded	1 set	
Printer		1 set	
Other accessories			
L-shaped Anchor Bolt	Include the nut	4 set	
Spare Sealing Element	Compound Gasket, OR GASKET	1 set	
Note: Pictures are for reference only.			

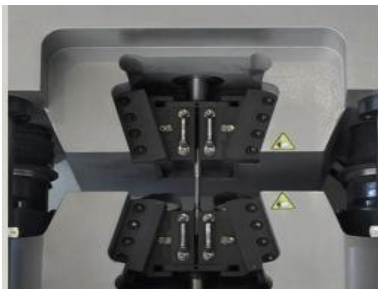
## Host Feature



## Testing Gripping Heads

Hydraulic Wedge type tensile grip, built in the frame of the machine. Hydraulic closure, with interchangeable gripping jaws, for clamping prismatic or cylindrical specimens.

- Flat jaws are suitable for clamping prismatic specimens
- Jaws notched "V" shape are suitable for clamping cylindrical specimens
- With Semi-open front grip have much higher stiffness much longer



Tensile testing of dumbbell shape steel bar



Tensile testing of dumbbell shape steel plate



Tensile testing of rebar



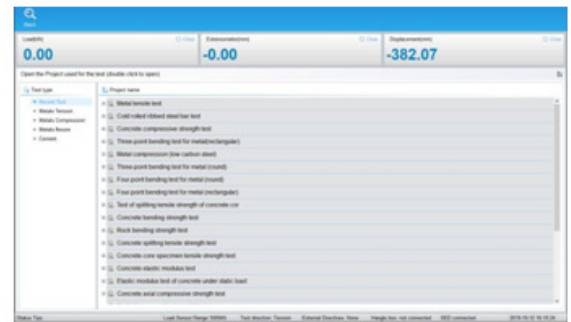
## Operation Software – HKTEST 4.0

### Test Process:

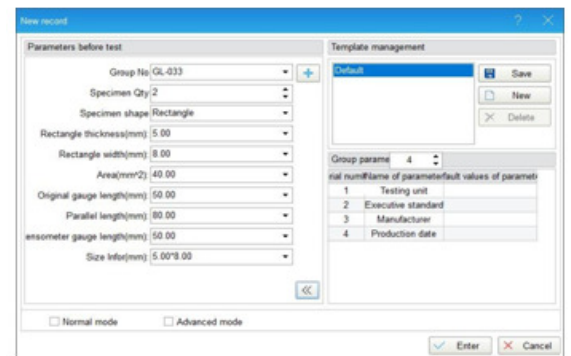
Selection a test--Enter the test scheme selection--Input the sample information--Start to test--end of the test

### Features:

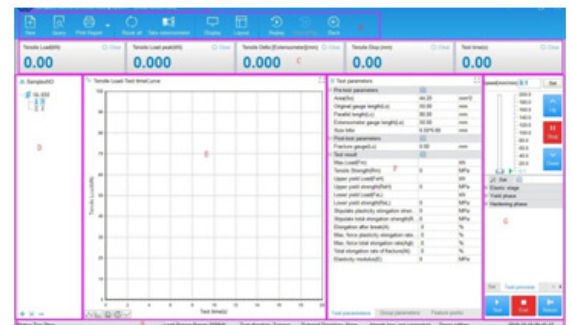
- **Full Digital Control:** The whole measuring and control system adopts the special controller, which can achieve the digital adjustment of zero point and gain of load, deformation and displacement, and it's easy to operate and possesses the high reliability.
- **Process the functions** of storage, setting and loading for various kinds of parameters, which make it convenient to connect multiple transducers with one load frame.
- **Realize the close-loop control**, and show the reference curve during the executive operator adjusting the close-loop parameters, so the user can observe the close-loop effect caused by the parameters.
- **Perfect graphic function to complete** the functions of the reappearance, amplification, reduction, self-adaptation, lapping of the curves, display and print the curve at the appointed range, observe the coordinate of the test point.
- **Data processing supports** automatic analysis and graphic man-machine mutual processing, which is convenient to check and compare the test results.
- Multilevel identity management, different identity has different functions, which not only makes the operation quick by ordinary operator, but also protect the system effectively.
- **Multi controlling channels:** Displacement, force control, deformation, control, stress control, strain control, constant stress, constant strain etc.



• Fig.1 Test Selection Interface



• Fig 2. Input the sample information



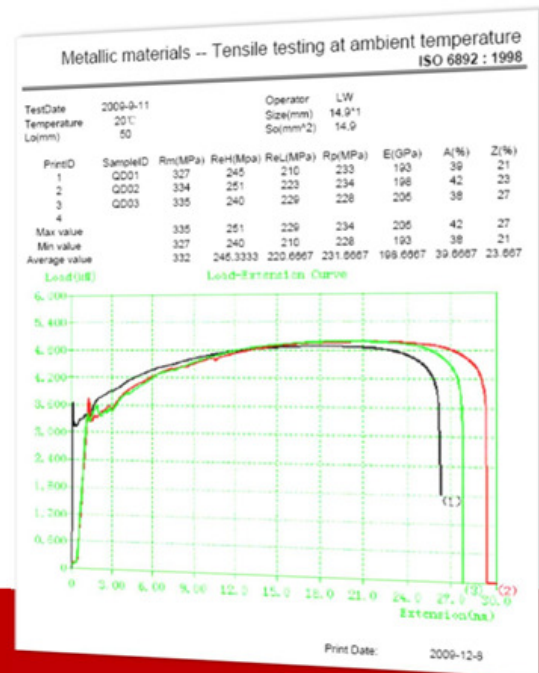
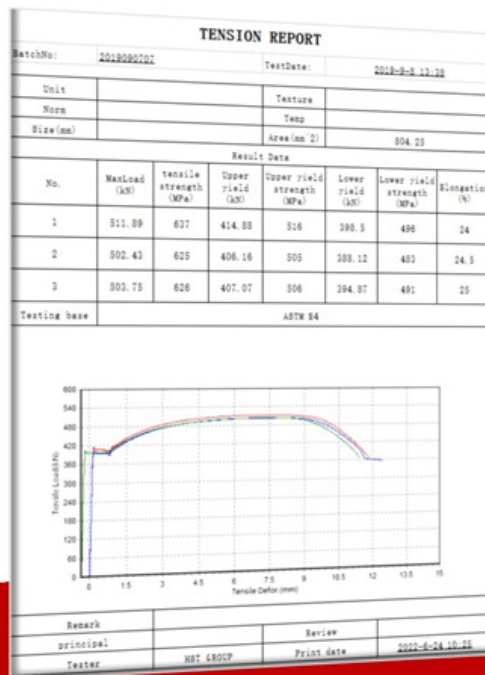
• Fig 3. Start to test



• Fig 4. Record video

- **Test standard:** provide users with the necessary applications to the test, covering ASTM, DIN, JIS, BS, GB ... and other testing standard specification.
- **Multi measurement units:** Load can be displayed in kN, lbf or kgf as selected by the operator.

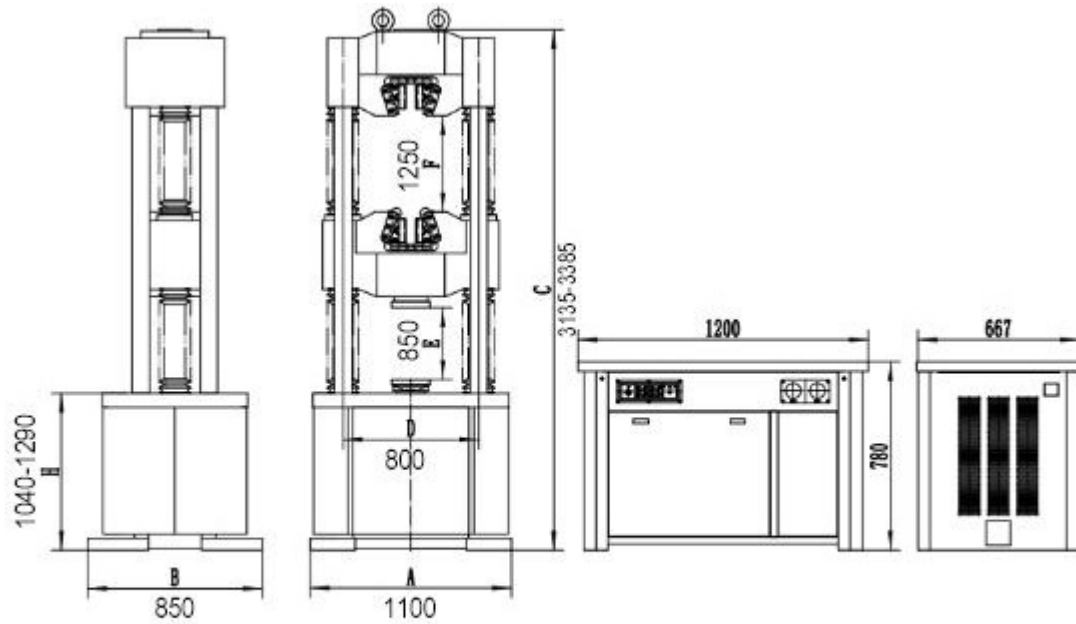
## Test Report



Output and print report: Excel, word, template test report, can be edited customize To show test information, including test person, test standard, test curve, test max load etc., can add your company LOGO and company name, easy to edit.



## Machine Dimension



	A	B	C	D	E	F	H
<b>JG-2000E</b>	1100	850	3135-3385	800	850	1250	1040-1290