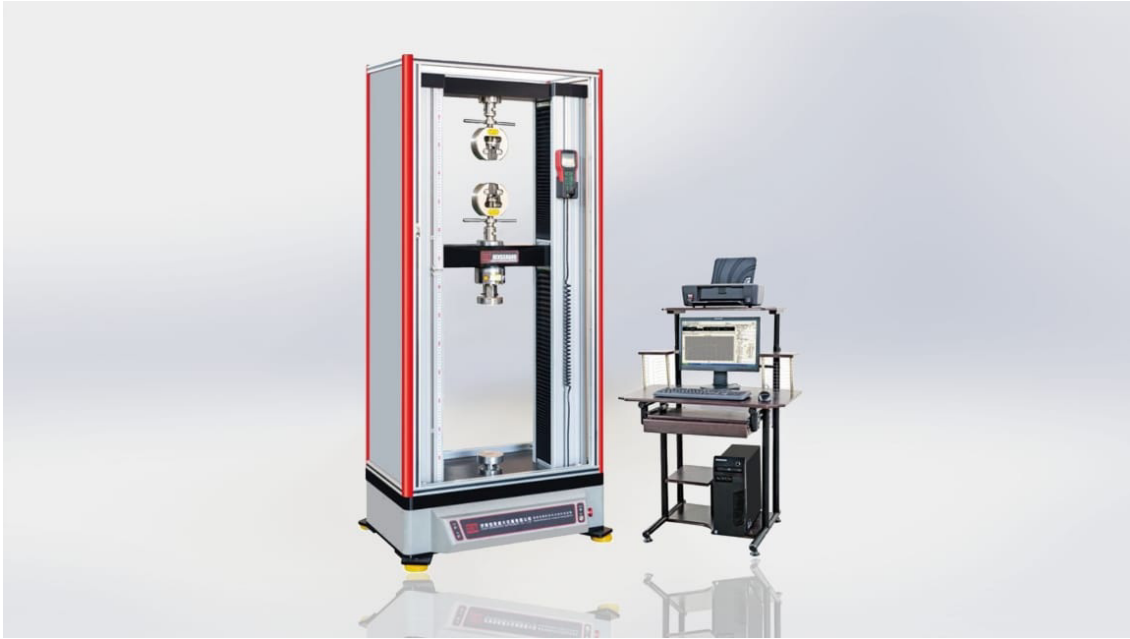


Computer Control Electronic Universal Testing Machine (Dual Space)

Brand: JNG

Model: JG-5000

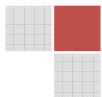
Capacity: 5,000kgf



(Photo for reference only)

Introduction

JG-5000 electromechanical testing machines offer force, displacement or deformation closed loop testing in tension, compression, flexure, shear, tear and peel etc. The machine can be equipped with a variety of accessories including: grips, fixtures, compression frames, thermal cabinets and extensometers covering all relevant applications as testing of rubber, plastics, foils, films, textiles, adhesives, paper, foods, foams, timber, wires or other metallic or non-metallic specimens and medical, electronic and other components. The load frames are rigid constructed, providing superior axial and lateral stiffness.



Application

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, EN 10002-4. Safety: This machine shall conform to all relevant European CE Health and Safety Directives EN 50081-1, 580081-1, 73/23/EEC, EN 61010-1

Rigid and Reinforced Plastics/Composite:

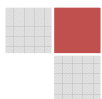
- ✓ EN ISO 6259 - parts 1/2/3 Determination of tensile properties of thermoplastic pipes;
- ✓ EN ISO 527-1 - parts 1/2/3 Determination of tensile properties on plastics;
- ✓ ASTM D638 Standard Test Method for Tensile Properties of Plastics
- ✓ ISO 604 Plastics - determination of compressive properties
- ✓ ASTM D695- Plastics -- Standard Test Method for Compressive Properties of Rigid Plastics
- ✓ EN ISO 9969 Determination of ring stiffness on thermoplastic pipes;
- ✓ ISO 14125 Flexural Properties of Fiber-Reinforced Plastic Composites
- ✓ ASTM D3846 Standard Test Method for In-Plane Shear Strength of Reinforced Plastics;
- ✓ EN ISO 13968 Plastics piping and ducting systems -Thermoplastics pipes- Determination of ring flexibility;
- ✓ EN ISO 844 Determination of compression properties;

Geo-textiles:

- ✓ BS EN ISO 10319 Geotextiles —Wide-width tensile test;
- ✓ ASTM D3950 Standard Specification for Strapping, Nonmetallic (and Joining Methods);
- ✓ JBT 8521(EN 1492-2): Textile slings. Safety. Round slings, made of man-made fibers, for general purpose use;
- ✓ ASTM D 6775-02 Standard Test Method for Breaking Strength and Elongation of Textile Webbing, Tape and Braided Material;

Metal:

- ✓ ASTM E8 Standard Test Methods for Tension Testing of Metallic Materials;
- ✓ ISO 6892 Metallic materials — Tensile testing — Method of test at ambient temperature;
- ✓ BS EN 10002-1 Determination of tensile properties on metals;
- ✓ BS EN 10002-5: Metallic materials —Part 5: Method of test at elevated temperatures;
- ✓ ASTM E21: Standard Test Methods for Elevated Temperature Tension Tests of Metallic Materials;
- ✓ ISO 783: Metallic materials -Tensile testing at elevated temperature;
- ✓ EN ISO 7438 Determination of flexure tests on metals;
- ✓ ASTM F606: Standard Test Methods for Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, Direct Tension Indicators, and Rivets;
- ✓ ISO 14589: Blind rivets - Mechanical testing;



- ✓ SAE J429: Mechanical and Material Requirements for Externally Threaded Fastener;

Mechanical Features

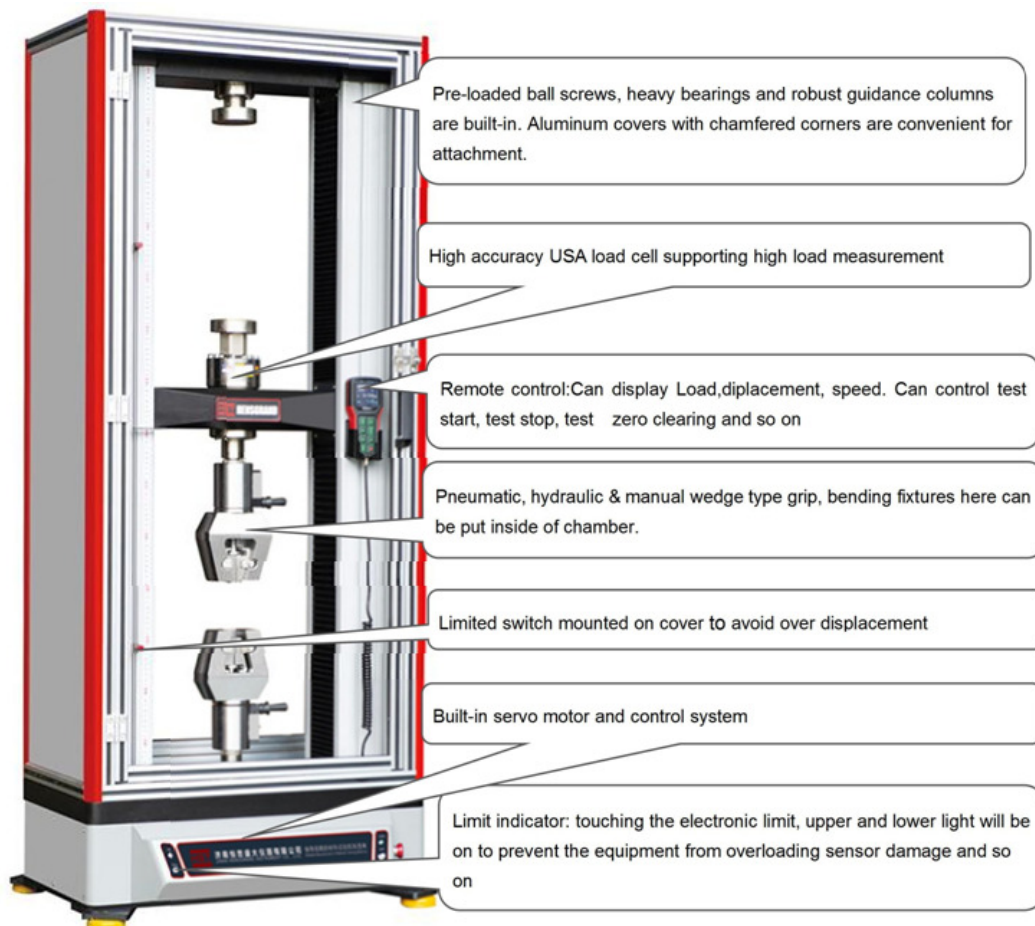
Load Frame: The frames all incorporate human factor considerations in the design to ensure safety, reduce operator fatigue, and provide the highest level of flexibility. Extremely robust crosshead guidance is incorporated in all frame designs providing the highest level of lateral crosshead stiffness.

High accuracy: The preloaded precision ball-screw with high speed & low noise ensures high speed and position measurement accuracy and less noise.

High stiffness frame: The load frame is with 4 columns and heavy duty pre-loaded bearings. Preloaded ball screws, precision guidance columns, and a symmetrical drive system improve frame stiffness and alignment

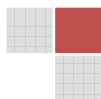
Safety features: The testing machine stops automatically when the change in the test force exceeds a specified value during operations.

Over-Travel Limits: Dual over-travel limits, located on the front console, help prevent crosshead overshooting and sensor overloads. A graduated rule along the column can be used to preset these limits to specific distances.











Technical Specifications




Model	JG-5000
Load Capacity	50Kn (5ton)
Calibrated Standard	Class 0.5 according to ISO 7500-1 – Meets ASTM E-4
Testing Load Accuracy	±0.5%
Testing Load Range	0.4%~100%FS
Load Resolution	1/500000FS
Deformation Measuring Range	0.2%~100%FS
Deformation Accuracy	≤±0.5%
Deformation Resolution	1/500000FS of the max deformation
Test Control Mode	Three closed loop control, stress, strain and displacement
Displacement Accuracy	Within ±0.5% of the value
Displacement Resolution	0.04μm
Control Parameters	
Constant Force Control Range	0.001%~5%FS/s
Constant Force Control Accuracy	When the rate is < 0.05%FS/s, it is within ±2% of the set value; when the rate is ≥0.05%FS/s, it is within ±0.5% of the set value.
Constant Deformation Control Range	0.005~5%FS/s
Constant Deformation Control Accuracy	When the rate is <0.05%FS/s, it is within ±2% of the set value; when the rate is ≥0.05%FS/s, it is within ±0.5% of the set value;
Crosshead Speed Range	0.001~1000mm/min
Crosshead Speed Accuracy	Within ±0.5% of the value
Mainframe parameters	
Testing Space (Crosshead Travel)	1100mm
Max. Tensile Testing Space	770mm
Test Width	450mm
Overall Dimensions	850x550x1824mm
Weight	About 420kg
Power Supply	1kW, AC220V±10%, 50Hz/60Hz
Note: ✓ Tensile space, test width, and speed is completely customizable.	



Standard Accessories

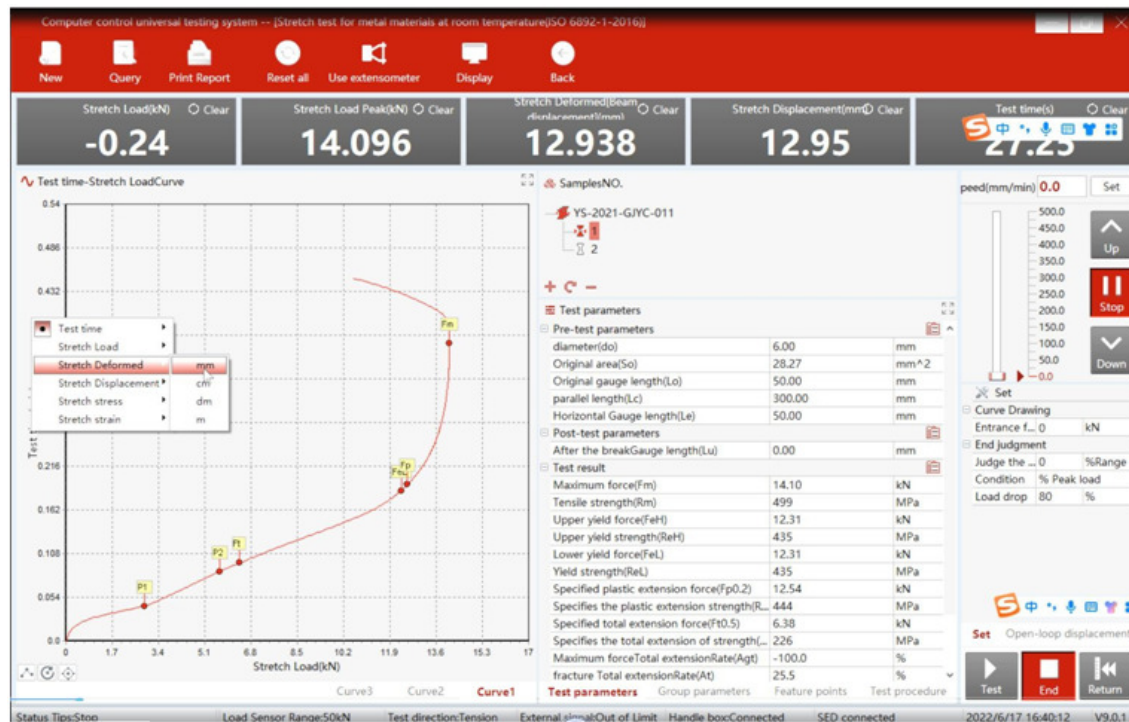
Name	Description	Qty	Picture
Computer Control Electronic Universal Testing Machine, JG-5000	50kN, 4 column 2 ball screw frame structure Double space (up tensile, down compression)	1 set	
AC Servo Control system	-	1 set	
Rubber Shock-Absorbing Pad	Effectively adjust the level of the equipment, reduce the vibration of the equipment during the test	4 set	
Testing Machine Control System			
50kN Load Cell	Calibration within 0.5% accuracy can be carried out as per ASTM E4, ISO 7500-1, EN 10002-2, BS1610, DIN 51221 standards.	1 set	
Control System	Force, displacement and deformation closed loop control by USB contact computer	1 set	
Test Software and backup U disk	HKTest 4.0: English	1 set	
Handheld Unit Controller	Digital Display: Can display load, displacement, speed. Can control test start, test stop, test zero clearing and so on	1 set	
Computer Set	Branded Computer Color ink-jet A4	1 set	
Testing Grips			
Manual Wedge Tensile Grip	Used for metal and non metal material: Adopt inclined self-locking and rotating handle clamping	1 set	



Round Jaw	Round specimen standard: $\varnothing 4\text{-}\varnothing 9\text{mm}$	1 set each	
Flat Jaw	Flat specimen Thick: 0-7mm	1 set each	
Compression test grip	$\varnothing 100\text{mm}$	1 suit	

Software Instruction

Software refers to the software characteristics of the top manufacturers of testing machine in the world and proposals of various testing requirements from the end users, and combines all the advantages of former versions of software with lots of new features. Optimized software structure makes the testing operation easy, convenient and powerful. Main interface as following, Computer software interface, display test data, setup method, sample size



Features

- Full digital control: The whole measuring and control system adopts the special controller, which can achieve the digital adjustment of zero point and

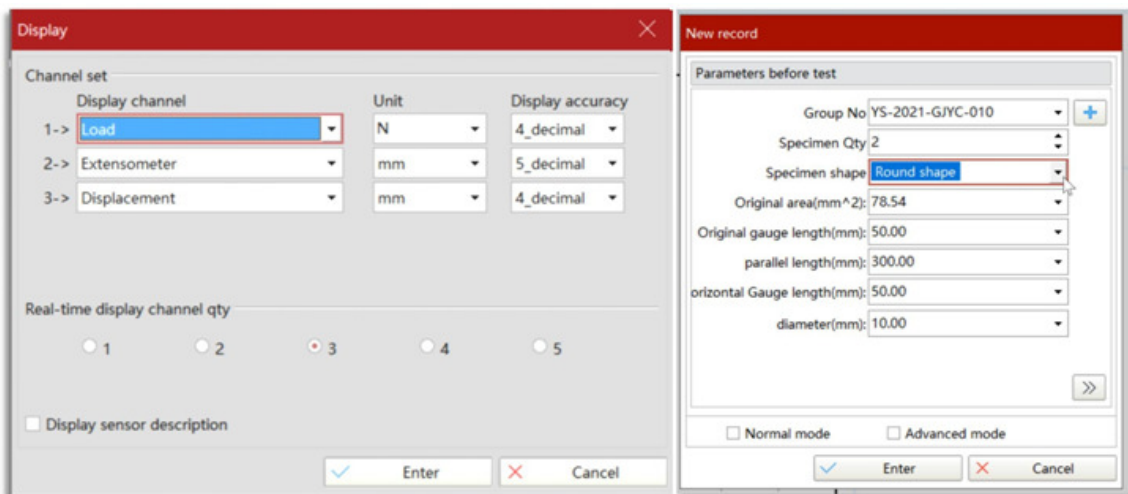


gain of load, deformation and displacement, and it's easy to operate and possesses the high reliability.

- Possess 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.
- Based on the database, test data is stored by form of text file, which is convenient for the user to inquire about and utilize the various kinds of commercial report forms to reprocess the test data, meanwhile transfer the data to the internet conveniently.

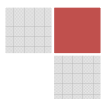
Multi Controlling Channels

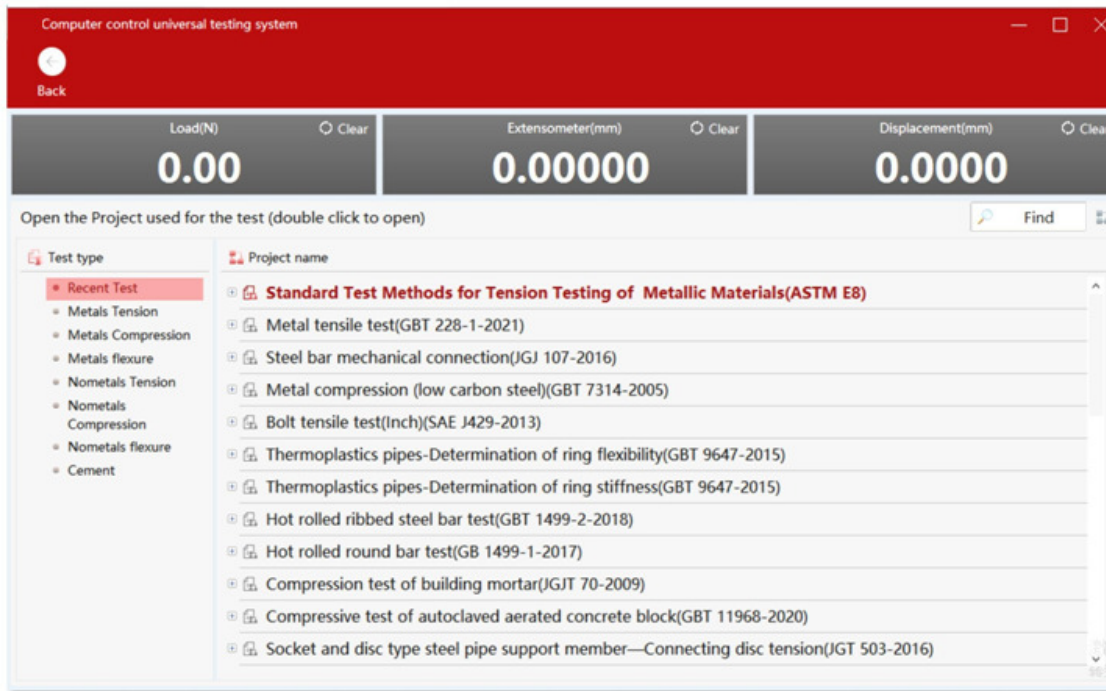
Displacement control, force control, deformation control, stress control, strain control, constant stress, constant strain etc.



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:

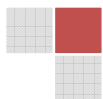
Load can be displayed in kN, lbf or kgf as selected by the operator.

Multi Controlling Channels:

Displacement control, force control, deformation control, stress control, strain control, constant stress, constant strain etc.

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.



TENSION REPORT

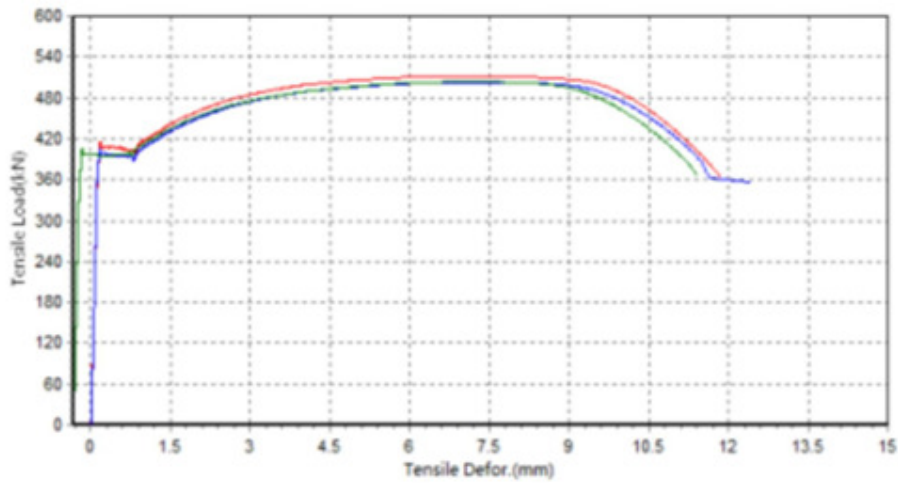
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Unit		Texture	
Norm		Temp	
Size (mm)		Area (mm ²)	804.25

Result Data

No.	MaxLoad (kN)	tensile strength (MPa)	Upper yield (kN)	Upper yield strength (MPa)	Lower yield (kN)	Lower yield strength (MPa)	Elongation (%)
1	511.89	637	414.88	516	398.5	496	24
2	502.43	625	406.16	505	388.12	483	24.5
3	503.75	626	407.07	506	394.87	491	25

Testing base	ASTM E4
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Remark			
principal		Review	
Tester		Print date	2022-6-24 10:25

