



User Manual of Universal Tensile Testing Machine

Operator's Manual

Read before Operation

Before operation this machine, please read this manual thoroughly, and keep a copy with the machine for future reference. This manual is to be considered part of your machine.

Model: NG-103



Add: NO.16, Shuijiao Gongye Road, Lichuan, Dongcheng,
Dongguan City 523000, Guangdong CHINA

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I. Foreword

Thank you for your chosen our company's products, we not only provide your company good quality products, and will provide reliable service.

To ensure the use of personnel safety and equipment integrity, before using this instrument ,please fully view this operation manual.

For the manual, do pay attention to the precautions on its use. This manual details the design principles of this instrument,according to the standard, construction, operation specifications, calibration, maintenance, possible faults and remedy the situation, electrical plans, etc.

If in the manual mentioned in the various "test rule ", the standards are for reference only, if you have any objection please review standards or information by your own.

Special notes:

- This manual can not be the basis for any requirements.
- We reserve the right for this operating manual.

II. Notice

2.1 Please comply with the following signs of warnings, dangers and attentions for the sake of prevention of accidents and dangers when using the apparatus.



Danger

The operator may be hurt if he does not comply with the specification.



Warning

The apparatus may be damaged if the operator does not comply with the specification.



Note

Using specification of the apparatus is added here.



Attention

Testing quality and results may be influenced.



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2.2 The warning and attention sign of instrument.

	Warning	Please refer to the manual if necessary.
	Dangerous Voltage	There is high voltage.
	Grounding Protection	The apparatus should be connected to the grounding terminal.

III.Summary

3.1 Apparatus Purpose:

The machine is applicable for testing the tensile strength, elongation rate, laceration, adhesion force, tensile strength, stripping force, shearing force as well as adhesion force between plastics and metal of various materials, finished products.

3.2 Design Principle:

Mainly Clamping the specimen, control load and speed by Electronic Control System. Inductive power through force sensor and transmitted to signal to the microcomputer systems to determine various properties of the specimen.

3.3 Application

The test machine for the industry, including: rubber, plastics, shoes, paper, packaging, machinery hardware, building materials, automobile parts, wire and cable industries for products such as: bicycles, motorcycles, racket, bat, construction hardware and other materials, parts, chains, gears, steel, ceramics, composites, plastics, cotton yarn, non-woven, ribbon, wire and other products

3.4 Main specifications

Capacity 500Kg

Load accuracy $\pm 0.5\%$

Effective stroke 800mm

Testing speed 1-500mm/min

Testing space The testing width is 400mm

Power 220v, 50HZ

Protector Upper and lower travel limit devices, automatic stop function breakpoints

Display Touch screen



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IV. Apparatus Introduction

Structure of the machine and the spare parts:





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V. Operation Instructions

5.1 Prepare the test specimen

Select the test samples from the same batch of specimens. And in accordance with standard cut sampling

5.2 Before the test should confirm below items:

- 2.1. Confirm that the machine is connected to the power supply meets specifications
- 2.2. Limit position switch and fixture screws are tight
- 2.3. Adjust the speed switches to the minimum in order to avoid excessive speed, causing the machine damage.
- 2.4. Test material should tighten by the clamp

5.3 Test Procedure

- 3.1. Connect the power (AC220V, 1A);
- 3.2. Turn on the power switch
- 3.3. The upper and lower bits set to adjust to the proper position and tighten with a hex wrench;
- 3.4. Tap look "up" or "down" button, so that the next alignment jig up and down
- 3.5. Secure the products being tested to see if the display shows "0.00", otherwise press of the "zero all" button; choose the desired unit (kg / lb. / N.).
- 3.6. Press the "up" button to start the test, specific test function set control panel instructions.
- 3.7. Repeat the test of the next product or turn off the power .
- 3.8. Cleanup the machine.

VI. Guidance of Touch Screen Controller

6.1. The main purpose and scope of use

The measurement and control system is specially developed for tensile machines, presses, and electronic universal material testing machines. It is suitable for measuring the mechanical properties and related physical parameters of various materials under tension, compression, bending, shearing, tearing, peeling, and puncturing.

6.2 Main features

The core device of the measurement and control system adopts the latest imported ultra-high-precision 24-bit AD, and the sampling rate is 400 times/second. The resolution of the entire process is 300,000 divisions. And using 12-point calibration technology to further improve the accuracy, so that the accuracy of force collection to the national standard. No positive and negative errors in the displacement count. 7-inch TFT color touch screen, directly input test parameters, Chinese and English operation interface layer prompts, users do not need to



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operate the manual to easily operate. In addition, RJ45 network interface can be used to communicate with the PC to activate the computer type, coupled with a dedicated TM2101N professional luxury measurement and control software, real-time display force - time, force - deformation, deformation - time, stress - strain curve, automatically calculate the maximum Force, maximum force point deformation, tear deformation, maximum force elongation, elongation at break, tensile strength, bond strength, tear strength, maximum peel force, minimum peel force, average peel force, peel strength, etc. , And has stripping interval set and print curve function.

The Full and Detailed Guidance Please See Our Controller TM2101-T7-01-G Manual

VII. Maintenance

- (1). The machine appearance should often wipe and keep clean.
- (2). For the lectroplating parts please use the oil clean to prevent rust,to ensure bright.
- (3). Please add oil to protect transmission of sensitive for Power screw and the screw part,. (Oil mixed with butter and add a little oil)
- (4). A variety of fixtures and fittings, please properly set, and wipe the rust oil to prevent rust.
- (5). Gear box should be checked for leakage every year fixed period, and check for gear oil, belts, chains should be adjusted once half a year.

VIII. System

Anomalies	Solve method
The machine can not working	1. Wires, connectors, fuses, switches, is damage or not. 2.Limit limit switches are connected. 3. Break point stop function is set to leave. 4. Wiring line fault, the magnetic field voltage.
Machine can only be one-way operation in conjunction board	1. Limit upper and lower switch is abnormal, stuck,damaged or loose contacts error 2. Operations button feature is lack of lubrication oil, replace the supplement. 3. Electromagnetic switch damaged



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Machine can working but with different sound	1. Screw lack of lubrication 2. Whether the lack of lubrication of gear box oil, replace the supplement. 3. Drive belt or chain is loose, should be adjusted, the chain should be lubricated. 4. Motor and control parameter settings are normal, or not, should be adjusted settings.
The speed can't setting or control	1. Control settings are abnormal 2. Control fine-tune the resistance of the substrate potential damage. 3. Control circuit fuse blows, replace and check the transformer



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IX Quality Assurance

I 、 The guarantee period is eighteen months (consumer goods and travel cost are not included).

II 、 The main quality warranty maintenance certificate

1. Please keep this guarantee letter, if you lost it, please connect with us in a month.
2. If this guarantee letter has been altered or it has no our stamp, it is useless.

III、 The following conditions need to pay reasonably even in the assurance period.

1. Natural reasons
2. Operating mistakes
3. Voltage is not fit for our operation instruction
4. Repack it without our guides
5. Damaged for borrowing to others
6. Damaged for authorized machine modification
7. Damaged for authorized calibration
8. Authorized transshipment mistake
9. Serve for long distance area

IV、 Notes:

1. Where the original in Guangdong province installation of our products, if the product moved to outside Guangdong-area use, whether or not within the effective warranty period, the transportation and travel expenses of the service personnel should be paid by the client.
2. All customers outside of Guangdong province, whether or not in the warranty period, the service of transportation and travel expenses paid by the customer.