
Tablet Hardness Tester

YD-1

User's Manual

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Introduction

Thank you for purchasing the product YD-1 Tablet hardness tester designed and manufactured by LORDERAN.

Please read user's manual carefully before using the product. It will help you operate it properly and efficiently.

Product Registration

Prior to use the product, please fill up the user's registration card and mail to us, in order to get our service in future.

Technical Service

Please contact our marketing department for any service during warranty. Be sure that you have sent back the user's registration card.

If you have any problems, Please try to find answers in user's manual first, or you can call our marketing department.

Proper Operation

Make sure you have read this manual carefully before installing/operating the instrument. For any concerns please contact us.

- Transport with care. Any incline, convert, and hit are prohibited.
- Check and protect all safety related labels.
- It is prohibited to use any damaged product and power cord.
- Turn off the power before maintenance, or moving.

Contact Us

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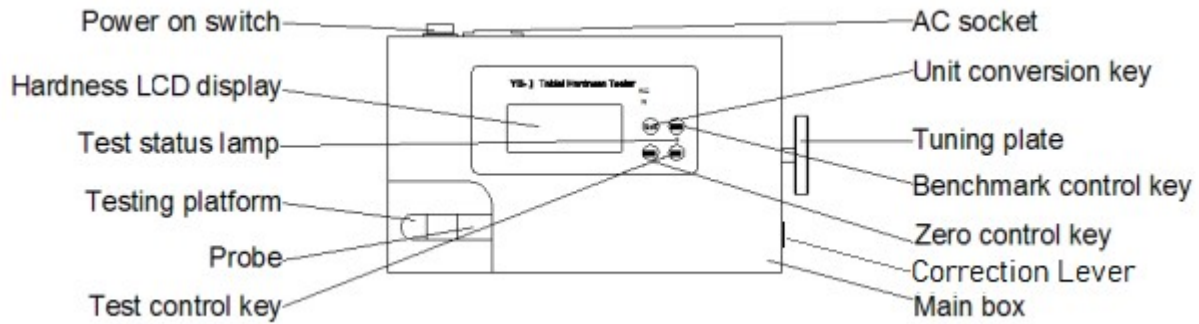
www.lorderan.com/

Introduction

Brief introduction

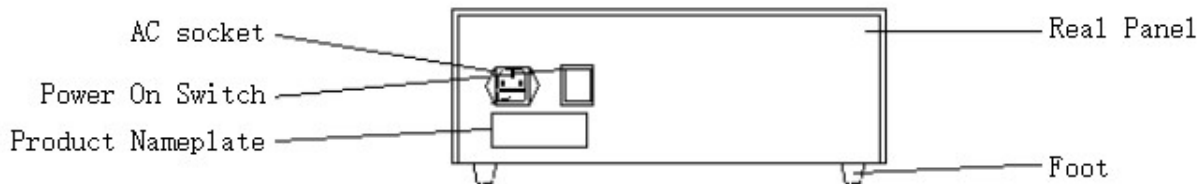
YD-1 Tablet hardness tester consist of main box, control system, sensor, transmission part, probe part etc. and centrally controlled by precision auto-control system consisted by micro-P. It has features of high-auto-operation, simplified control, and convenience for operation, high accuracy, high sensitivity, concision style and lower noise.

YD-1 Tablet hardness tester consist of bottom, main box, front panel, rear panel etc.



Front panel includes:

- Hardness LCD display
- Product name
- Unit conversion key (**Unit**)
- Zero control key (**Zero**)
- Benchmark control key(**Base**)
- Test control key (**Test**)
- Test status lamp



Rear panel includes:

- Power on switch
- AC socket(fuse jack included)
- Product Nameplate

Function description

● Hardness LCD display

4 digital LCD display hardness value of test.

● Unit conversion key

Hardness value, unit conversion key units of the hardness value measurement Newton (N), and conversion of kilograms (KG). This function can be used before and after measurement.

● Test control key

Test status button to start the measurement condition of function keys, into the state, may realize the instrument zero and benchmark of instrument calibration.

● Zero control key

Zero function keys, the instrument did not test, if appear hardness value display is not zero. Press this button, the screen will display for 0000. This function should be used in entering the calibration status.

● Benchmark control key

Benchmark function keys. To benchmark parameters calibration for instrument. This function should be used in entering the calibration status.

● Test status lamp

Test indicator light to show the system working status indicator light. The set-up of the calibration indicator, said systems, can be in this state under zero and calibration work, in this state, no peak locking function. When the calibration indicator lights out, into the normal test state hardness value.

● Power on switch

Power on switch is main power switch, in on position, tester is in stand by status, OFF position, tester stop working.

Before connecting to AC power, please ensure it's in OFF position!

● AC socket

Ac socket is connected to the power supply with power cord offered in this tester.

Fuse is under the ac socket, attached one 1A fuse and backup one is offered. This is to prevent damage to this tester in suddenness case happened.

Please make sure ac power supply is connected properly!

When change fuse, make sure same spec part is used for tester safety!

● Transmission Parts

Transmission Parts are made up of tuning plate, transmission devices and etc. used for squeezing the tablets. Turn the transmission plate counterclockwise the probe goes to left and the squeezing force increase; turn the plate clockwise, the probe goes right and the squeezing force decreases.

● Probe Parts

Probe parts are made up of probe and testing platform. The probe is connected to the sensor and the testing platform is used for holding the tablets. Be extraordinary careful and make sure the force applied on the probe is no more than 200N.

Specification

Test range	2-199.9 N
Hardness accuracy	±0.5% (Max. Range)
Probe procession range	20 mm
Diameter of tablet can be tested:	2-20 mm
Power	220V/ 50Hz, 110V/ 60Hz, 10 W
Dimension	280×180×110 mm
Weight	5 kg

Environment requirement

Usage temperature	+18℃ ~ +28 ℃
Store temperature	-10℃ ~ +50 ℃
Humidity	20% ~ 80% RH

Installation

Checking

Open package, take out manual, tester, and accessories, and check items per packing list, any mismatch/damage happened, please contact marketing department immediately.

Instrument settle

Tester must be placed in stable work station/ table and put damping pad between table and tester. Clean tester periodically to prevent dusty affect normal operation.

Connect to the power supply

Link the socket & ac power supply source with attached power cord.

Calibration

Zero Setting of Hardness

First start the instruments, preheating, such as LCD window shows the numerical hardness not for 0000. Now need to debug the equipment into the state, in the debug function when the light is

bright, the lower zero button, make the hardness of the LCD panel display value of 0000. According to the calibration function keys again, exit the debug state.

Hardness value is rectified

- ① The user shall install Weight Hook on the Correction Lever on the right side of the instrument.
- ② Hold the instrument by hand and set it vertically, so that the left side is placed down on a flat soft table and Weight Hook is exposed outside the table.
- ③ Start up, press the Test control key, and make the instrument enter the debugging status; press the zero setting key and set the hardness value to be 000.0N (00.00KG).
- ④ Hang 5KG standard weight on Weight Hook, and the hardness value should be 049.0N ($\pm 0.5N$). Be careful to operate it and do not collide it with force.
- ⑤ If the displayed value is incorrect, press Benchmark control key, and set the hardness value to 049.0N ($\pm 0.5N$)
- ⑥ Remove 5KG standard weight, press the Zero control key, and set the hardness value to 000.0N.
- ⑦ Repeat steps ⑤~⑥ until the value reaches 000.0N in unloading and reaches 049.0N in loading.
- ⑧ Place the instrument on the table horizontally, press the Test control key, and exit the debugging status until the hardness correction is completed.

Operation

Power on

Turn the power switch to ON position, the indicator light, initialize the tester for 20 minutes, then it's readiness.

Pre-heated for 5 minute, the system is at the initial state. The system should be adjusted to display 000.0 in hardness indicator if necessary. 5 more minutes later the system is at testing state and ready for testing.

Test

Turn the tuning plate clockwise and move the probe right to proper position. Put the tablet to be tested on the testing platform and turn the tuning plate counterclockwise carefully. The number displayed on the hardness indicator increases along with the probe squeezing the tablet. The number on hardness indicator reaches the biggest at the time the tablet is to be broken. The system will lock the number and beep sounds, the number on the LCD indicator is the hardness of the sample. About 5 seconds later, the beeper stops sounding and the system is ready for the next test.

Power off

Turn switch to OFF position, the indicator is off, tester stop.

Demonstration

- ① Power on and preheat the tester.
- ② Zero adjustment.
- ③ Place the tablet on the test plate, begin test.
- ④ Read the hardness.
- ⑤ Same with above portion repeat 2-4 steps.
- ⑥ Turn off the tester after test completed.

Maintenance

Must clean box and parts periodically, do not use steel brush, it result in damage to the tester.
After testing every time, please clean rotation parts and ensure dry to avoid damage to the tester.

Troubleshooting

● Can not power on

Check whether the voltage is OK and fuse is OK, please refer to the rating marked in nameplate while installation.

If the tester does not work after checking above items, please don't repair it by yourself, contact our market department please.

Packing list

YD-1 Tablet hardness tester include following items typically:

- Tester _____ 1
- Power cord _____ 1
- Brush _____ 1
- Hook _____ 1
- User's manual _____ 1
- User registration card _____ 1

Product quality guarantee

- This quality guarantee covers the scope of YD-1 Tablet hardness tester.
- Start from purchasing date; warranty period is one year.
- This quality guarantee is effective from receiving registration card filled by users.
- During warranty, we offer free charge service for troubleshooting in normal cases, but for any cases caused by flood, fire, earthquake, or other calamity, is excepted.
- During warranty, in one of the following cases, we will charge for material/service:
 - No product quality guarantee, mismatch with this guaranty or wrong record/remark.
 - Damages caused by unusual working environment.
 - Damages caused by disassembly, install, extend, move or modify without our permission.
 - Damages caused by repairing without our permission.
 - Damages sensor caused by overloading or struck.
- Keep this guarantee in proper place and any other issue is provided.

Using Instruction

- Proper operation & maintenance will prolong the working time of the instrument. Please follow the manual's instruction carefully.
- When the power supply is unstable, please Use AV regulator. Pay special attentions to the information related to power supply, temperature, humidity in the manual.
- Always keep the instrument cleaning. Disassembly/move any parts of the tester is prohibited.
- In case of trouble present, please stop using, call us or dealer for help.
- The guarantee is only applicable in Chinese mainland.

Registration card

User Name

User Address

Post Code _____ Email

Tel. _____ Fax

Product Name

Product Model _____ Product No.

Seal of the User