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# **Tablet Friability Tester CS-1**

## **User's Manual**

**Shanghai Lorderan Scientific Instrument Co., Ltd.**

# Table of Contents

Table of Contents .....	1
Introduction.....	2
Product registration.....	2
Technical service .....	2
Proper operation.....	2
Contact Us.....	2
Introduction.....	3
Brief introduction.....	3
Function description.....	4
Specification .....	5
Environment requirement .....	5
Installation.....	5
Unpacking and Checking.....	5
Tester settle .....	5
Connect to the power supply .....	6
Operation .....	6
Power on.....	6
Revolution preset .....	6
Rotate speed preset .....	6
Test.....	6
Power off .....	6
Demonstration .....	6
Maintenance .....	7
Troubleshooting .....	7
Packing list.....	8
Product quality guarantee .....	9
Using instruction .....	9
Registration card .....	9

## Introduction

Thanks for purchasing the product CS-1 Tablet friability tester designed and manufactured by us.

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

Pls. 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, Pls. 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 pls. 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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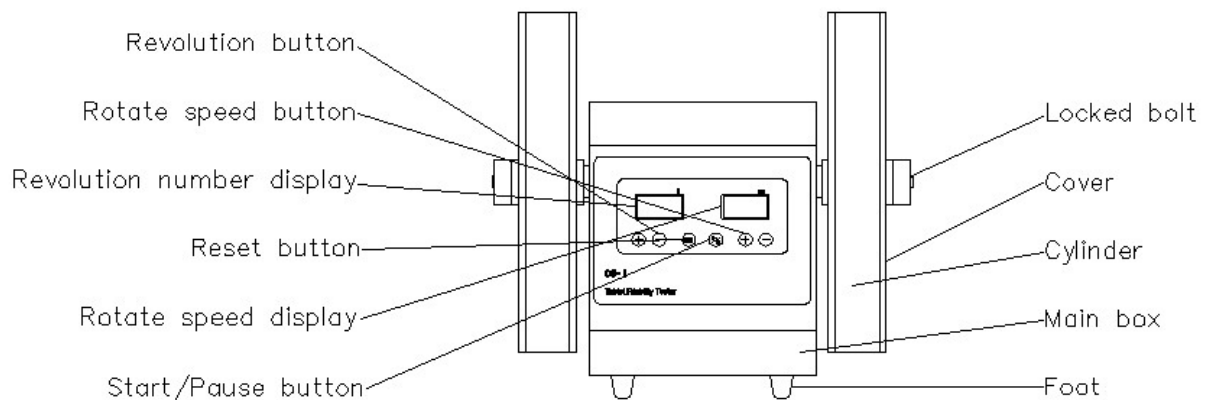
[http: //www.lorderan.com/](http://www.lorderan.com/)

## Introduction

### Brief introduction

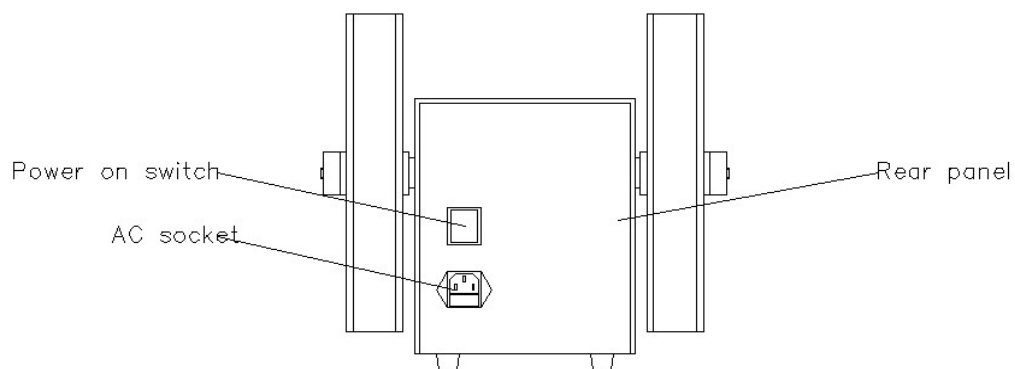
CS-1 Tablet friability tester is composed of control system, transmission system, and rotation accessories etc. And central controlled function is performed by MPU. The features: reasonable structures, auto and simple operations, high accuracy and sensitivity, and stable working performance.

CS-1 Tablet friability tester main box consist of bottom, foot, box, front panel, rear panel etc.



Front panel includes:

- Revolution number display
- Rotate speed number display
- Revolution button
- Rotate speed button
- Start/Pause button
- Reset button
- Product model



Rear panel includes:

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

## Function description

- Revolution number display

Revolution number display with three LCD screen, used to display several numerical or actual rotating turntable preset rotating circle number value.

- Rotate speed number display

Speed display window with three LCD screen, used to display speed dial preset values or actual speed value.

- Revolution button

Revolution button is to preset revolution numeric. Press this button, can preset revolution numeric.

Press the revolution button, then short instrument internal buzzer rang.

- Rotate speed button

Speed button, keys for preset rotary speed value. When press the speed button, you can change the preset speed value.

Press the speed key, then short instrument internal buzzer rang.

- Start/Pause button

Start button control rotation part / transmission system status. Press this button, can start/stop rotation part and transmission system, with beep sound.

- Reset button

Reset button is to reset system, press reset button, control system resume to initial status.

- Power on switch

Power on switch is main power switch. In ON position, tester is in working status; OFF position, 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, include attached one 1A fuse and backup one. 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!*

## Specification

Model	CS-1
Drum Number	2
Drum Radius	Dia 286mm
Drum Depth	39 mm
Tablet Fall Height	156 mm
Rotation Speed	20~90 rpm
Rotation Speed Accuracy	±1 rpm
Rotation Count	10~900 r
Rotation Count Accuracy	±1 r
Power Supply	220V/ 50Hz, 110V/ 60Hz
Power	60W
Dimension	370×300×340 mm
Weight	12 kg

## Environment requirement

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

## Installation

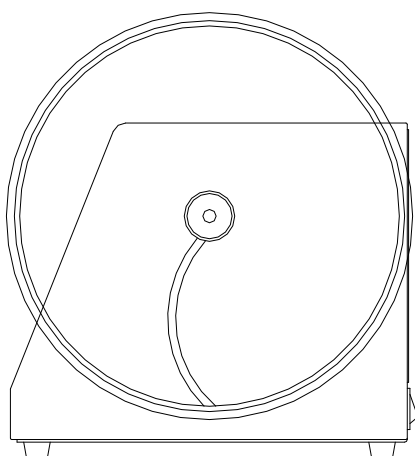
### Unpacking and Checking

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

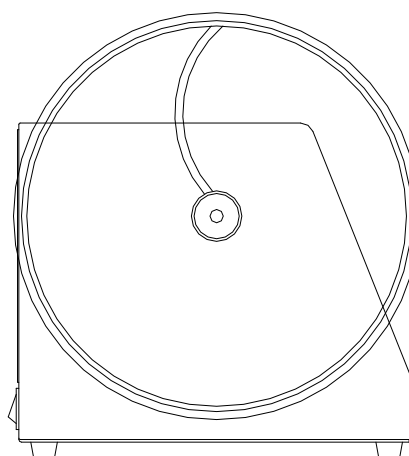
### Tester settle

Tester must be placed in stable work station/ table and put damping/ rubber pad between table and tester.

Install the rotation part (don't confuse left & right side) onto the level axis and lock them.



Right



Left

The bolts on the left and right side are fasten by front rotate and loosen by back rotate.  
Minimum space required around tester is 0.5m, to ensure heat escaping, clean tester periodically to prevent dusty affect normal operation.

## Connect to the power supply

Connect the socket & AC power supply source with attached power cord.

## Operation

### Power on

Turn the power switch to ON position, the indicator light, initialize the tester for 10 minutes, then it's readiness.

The first status is reset position, revolution numeric is auto set to 100R, rotate speed is 25RPM.

### Revolution preset

The first status is reset position, revolution numeric is auto set to 100R.

Laps if need to change the preset value, you can click on the circle of several key (+), the preset circle Numbers in 105; Press the number of turns (-), preset numerical into 95 laps.

Rotation count: 5-900R.

### Rotate speed preset

The first status is reset position, rotate speed is 25 RPM.

If you need to change the preset speed, can press the speed button (+), preset speed numerical into 26; Press the speed button (-), to 24 preset speed value.

Rotation speed: 20-100RPM.

### Test

Put the rotation part off and open the cover, put in 6.5G sample material and close the cover, put it onto the level axis and lock the bolts. Press start button, the test is begin. After 100R rotating with 25RPM, the rotation part stops, measure sample's friability.

### Power off

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

### Demonstration

- ① Power on.
- ② Put the rotation part off and open the cover, put in sample material and close the cover, put it onto the level axis and lock the bolts.
- ③ Press start button, the test is begin.
- ④ After 100R rotating, the rotation part stop, measure sample's friability.
- ⑤ Same measurements can be completed by carry out 2-4 steps repeat.
- ⑥ Clear test, please press reset button.

## Maintenance

Must clean box and parts periodically. Do not use steel brush, it will 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 and contact our marketing department please.



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## Packing list

The CS-1 Tablet friability tester include following items typically:

- CS-1 Tablet Friability Tester—————1
- Power cord—————1
- Rotation accessories—————2
- User’s manual—————1
- User’s registration card—————1

## Product quality guarantee

- This quality guarantee covers the scope of CS-1 Tablet friability 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.
- Keep this guarantee in proper place and any other issue is provided.
- The guarantee is only applicable in Chinese mainland.

## 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, pls. 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, pls. Stop using, call us or dealer for help.

## Registration card

Name	
Address	
ZIP	E-mail
Tel	Fax
Product	
Model	S/N