Leather rubbing color fastness tester
MODEL：LX-6504

Operating instructions

This manual describes the machine settings and technical parameters. Please keep them in a safe place. Please read the instructions carefully before use.

Foreword

Thank you for choosing your company's products. The company will not only provide you with good quality products, but also provide reliable after-sales service.
In order to ensure the personal safety of the user and the integrity of the instrument, please read this manual thoroughly before using the instrument and pay attention to its precautions. This manual describes in detail the design principles, standards, construction, operating specifications, calibration, maintenance, possible failures, and troubleshooting methods, electrical diagrams, etc. of the instrument. All the “testing regulations” and standards mentioned in this manual are for reference only. If your company feels disagreement, please review relevant standards or data by yourself.

Special statement:

- This operation manual cannot be used as the basis for any request to the company
- The right to interpret the operation manual in our company

Safety precautions

1. Safety signs:

Please note that the following marks are intended to prevent accidents and hazards, protect operators and instruments, and ensure the accuracy of test results.

Dangerous： This sign indicates that the operator may be injured if not followed.

Warning： This sign indicates that failure to comply may damage the instrument.

Noted: This flag indicates that the accuracy of test results may be affected.

Noted: This mark is an auxiliary instruction in the operation and use of this product.

Overview

1.The main functions of the instrument are introduced.

This instrument is an integral instrument. The dry or wet wool felt is placed in the groove of the lower surface of the friction hammer, and a weight of a specified weight is placed above the friction hammer to reciprocate the friction sample surface of a certain stroke at a specified speed. After the movement reaches a specified number of times, the damage and decolorization degree of the sample surface are observed.This instrument is suitable for leather, textile, tape, trademark, cardboard and other materials suffered from friction damage and decolorization degree.

This instrument conforms to the following standards:

EN 344 ISO 11640

2.Main technical parameters

Farmar weight: 500g

Friction distance: 35 mm

Friction speed: 40±1rpm

Specimen size: 150×20mm

Area of felt: 15mm×15mm

Size: 430 * 280 * 480 mm

Power connection: 220V 10A

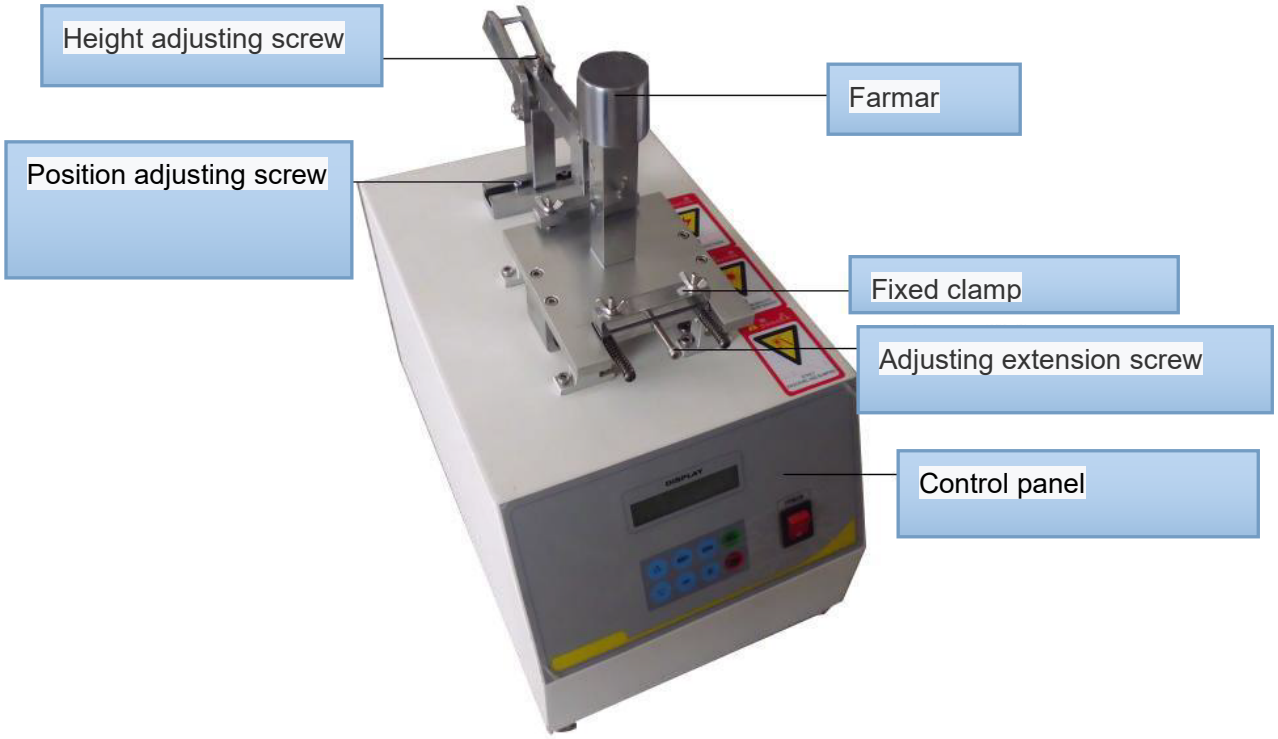

Figure 1

Adjust the position of the moving screw, which can move the load weight with the support left and right, adjust the stress position of the sample.Fixture clamping sample as shown in the figure, loosen the knob, place the sample, flatten the sample and tighten it.The bracket is kept horizontal by means of height adjusting knob.

Control panel

Figure 2

Power: Power button, turn on and off the Power of the instrument

Start: Start button

Stop: Key to Stop

Zero: Clear the value to Zero

Shift: Set key, load from normal state into modified state, modify test times, and finally confirm and return to normal state.

+, -(numeric increasing, decreasing key)

▲: Shift key

▼: Shift key

Figure 3

As shown in figure 3:

Pv: actual number of movements

Sv: number of reciprocating motion set

Rpm/m: speed value. There is only one speed value in this instrument. The unit is times/minute.

Turn on the power supply and press the Shift key, and the display window is shown as figure 3. The tens of thousands of digits of the value displayed by Sv is in a flashing state. Change the value through the +, - key, and then press the +, - key to move the modification number.After the setting, press the Start button to Start the test, and the instrument will stop automatically after the set number of movements.If you need to Stop halfway, press the Stop key.Press Start to continue the test.Press Zero to clear the record before the next test.

Operating steps

1.Ready to sample

1.1Sample preparation: select from the same batch of materials.

1.2 sample making:

1.2.Use a cutter or scissors to cut a 150mm× 20mm strip from the material to be tested.

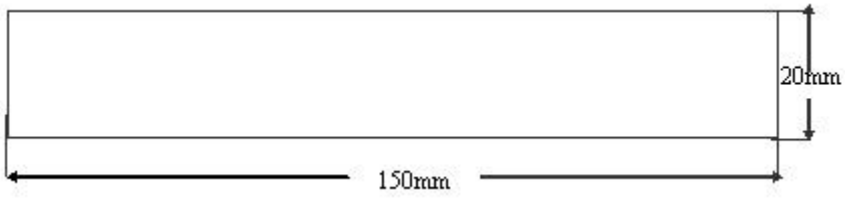

Figure 4

1.2.Number of samples: test more than two pieces of the same material (dry and wet).

1.Prepare 4 pieces of 15mm15mm felt, 2 pieces for dry test and 2 pieces for wet test.

Noted: Provide other friction materials (such as sandpaper, etc.) according to the standard.

2.Test steps

2.Connect the correct power supply.

2.2. Clamping friction is shown as follows:

1) adjust the knob of parallel height to make the friction connecting rod of the friction head perpendicular to the surface of the machine.(this is the load of the friction head in the sample)

2) clamping method: place dry or wet wool felt on the friction hammer groove.

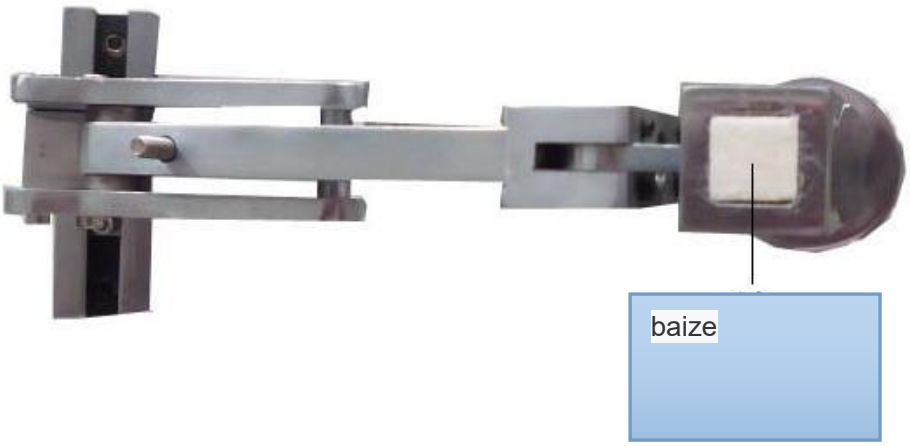

Figure 5

2.3 installation test piece as shown in figure 6:

1) loosen the four adjusting nuts, put the sample face up in the splint, place it on the test table, and lock the four sample screw nuts.

Figure 6

2) adjust the extension bolt of the sample to see the scale (as shown in Figure 7) to extend the sample.

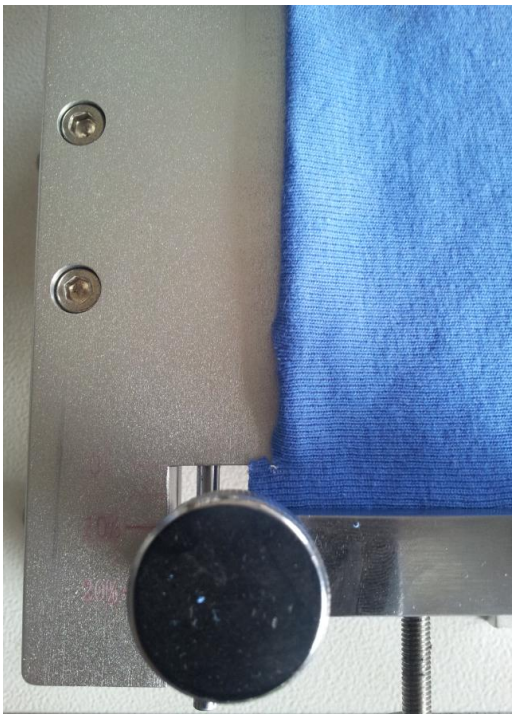

Figure 7

Noted: The specimen shall not be crumpled on the test table.

(The following operating specifications are illustrated only with the wool felt friction as an example)

2.4 dry sample test

1) set the number of tests according to the standard (see figure 2 for counter number setting instructions for operation).

2) sample installation.

3) install abrasive materials.

4) adjust the parallel selection button so that the connecting rod of the friction head is perpendicular to the surface of the machine (as shown in FIG. 8). Press the friction hammer gently on the surface of the test bed sample, and the friction object is in complete contact with the test piece.

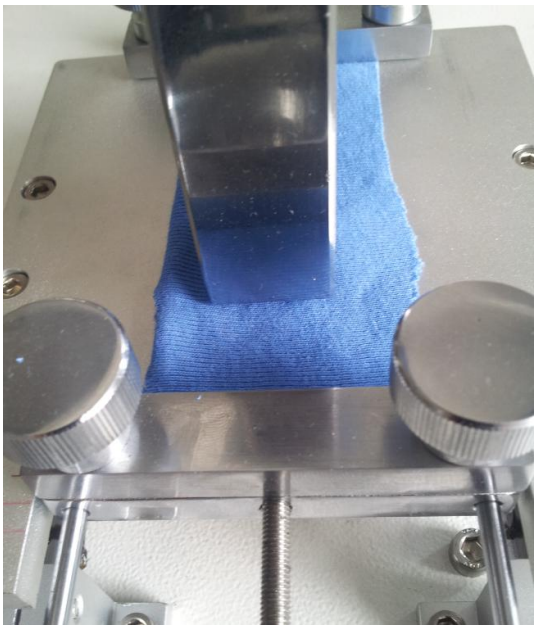

Figure 8

5) Start the power supply, and the machine will stop automatically when the set number reaches.

6) Take the friction hammer to remove the felt, remove the test sample, and turn off the power.

2.5 wet sample test

1) Set the test times according to the customer's standard (see figure 2 for instructions on setting the test times of the counter for operation)

2) Place the wool felt in room temperature distilled water, and then heat the water to boil. Take out the wool felt and cool it in room temperature distilled water. When the wool felt is cooled to room temperature, it can be used for testing.

Noted: The felt should not be soaked in water for more than 24 hours.

4) immerse the sample to be tested in distilled water completely. When the sample is fully soaked, take it out and press dry the attached water.

Noted: The test tablets should not be immersed in water for more than 1 hour.

5) sample installation.

6) clamping abrasive materials.

7) adjust the parallel selection button so that the connecting rod of the friction head is perpendicular to the surface of the machine (as shown in figure 1.2 and 1.3). Gently press the friction hammer on the surface of the test bed sample, and the friction object will be in complete contact with the sample.

8) start the power supply, and the machine will stop automatically when the set number reaches.

9) take the friction hammer to remove the felt, remove the sample and turn off the power.

Noted: Remove the felt and place it on a clean table or white paper.

3. Result judgment:

3.1 two pieces of wool blankets and test pieces after dry and wet test are placed under the standard multi-light source color matching lamp (purchased separately) and compared with the standard color card, and the decolorization grade is assessed by naked eye according to your company's test standard.

4. Calibration

4.1. Load correction method:
1) fix the friction hammer with one end of the thin line, then hook the other end of the thin line with the tension manometer and extend it vertically upward until the friction hammer is completely out of the test frame.
2) the display value of the tension gauge is the same as the counterweight weight of this machine.
4.2 speed correction method:
1) the counter returns to zero and sets the counter correction times.
2) turn on the power supply of the machine and time the stopwatch at the same time.
3) when the stopwatch reaches 1 minute, stop the timer and turn off the machine power. Observe whether the time of 1 minute is consistent with the standard speed.

Maintenance and maintenance

1.Keep the machine clean at all times, wipe the machine with cotton cloth before and after each test to keep it clean.
2.Spray anti-rust oil on the surface of the machine regularly (wipe it off after 2 hours).
3.Regularly add lubricating oil to the transmission parts of the machine (such as bearings) (choose ordinary oil).
4.Regularly check whether the buttons and counters on the panel are normal.

Trouble shooting

Failure case	Possible reasons	Exclusion method
Turn on power switch, unable to start	Power not entered Blown fuse	Ask an electrician to check and repair the power lines Replace fuses of the same

		capacity
Start the power button, the machine cannot operate	Check that the counter has reached its set value	Reset the counter and reset to zero and restart.
The fuse has been repeatedly burnt out	Abnormal input voltage The motor abnormalities	Ask electrician to check and restore normal power supply Motor damage, repair or replace
The machine is running normally, the counter cannot count	Inductor induction abnormal Inductor fault Counter failure	Adjust the proximity switch's induction screw to the appropriate position Replace inductor Replacement counter

Quality guarantee

1.Quality assurance items

The experimental machine is free of charge for one year after delivery (consumables are not free, excluding travel expenses).

2.The main voucher for free service

In case of any dispute about the service items, the guarantee > issued by the company shall be taken as the certificate.

Reason: 1.Please keep the < guarantee > properly. If you lose it, please contact our customer service department within one month.

3.Special case

In case of any of the following circumstances, it is necessary to charge technical or material fees as appropriate even within the valid warranty period:

(1).To destroy by an act of god.

(2).Failure due to user's fault or operation error.

(3).Not in accordance with the provisions of the use of damage.

(4).Self - repair to damage.

(5).Lend to others to use even break down.

(6).Self-modification to failure.

(7).Self-calibration to failure.

（8）.Transfer or delivery to fault.Remote area service.

4.Warranty precautions

（1）. Any installation and use of the company's products in the region, if the products are moved to other places for use, whether within the warranty period or not, the transportation expenses and travel expenses of the service personnel shall be borne by the customer.

（2）. For customers outside guangdong province, whether within the warranty period or not, the transportation expenses and travel expenses of the service personnel shall be paid by the customers.

Quality inspection report

Inspection items	Test case	Audit situation	Note
Outside view	OK	OK	
Counter	OK	OK	
The friction head	OK	OK	
Test each function key	OK	OK	
Fixture application	OK	OK	
The motor	OK	OK	
Wiring	OK	OK	