

Dear Client,

Thank you for purchasing our HTYKS-H Automatic Open Cup Flash Point Tester. Please read the manual in detail prior to first use, which will help you use the equipment skillfully.



Our aim is to improve and perfect the company's products continually, so there may be slight differences between your purchase equipment and its instruction manual. You can find the changes in the appendix. Sorry for the inconvenience. If you have further questions, welcome to contact with our service department.



The input/output terminals and the test column may bring voltage, when you plug/draw the test wire or power outlet, they will cause electric spark. PLEASE CAUTION RISK OF ELECTRICAL SHOCK!

## **SERIOUS COMMITMENT**

All products of our company carry one year limited warranty from the date of shipment. If any such product proves defective during this warranty period we will maintain it for free. Meanwhile we implement lifetime service. Except otherwise agreed by contract.

## **SAFETY REQUIREMENTS**

Please read the following safety precautions carefully to avoid body injury and prevent the product or other relevant subassembly to damage. In order to avoid possible danger, this product can only be used within the prescribed scope.

*Only qualified technician can carry out maintenance or repair work.*

--To avoid fire and personal injury:

### **Use Proper Power Cord**

Only use the power wire supplied by the product or meet the specification of this produce.

### **Connect and Disconnect Correctly**

When the test wire is connected to the live terminal, please do not connect or disconnect the test wire.

### **Grounding**

The product is grounded through the power wire; besides, the ground pole of the shell must be grounded. To prevent electric shock, the grounding conductor must be connected to the ground.

Make sure the product has been grounded correctly before connecting with

the input/output port.

### **Pay Attention to the Ratings of All Terminals**

To prevent the fire hazard or electric shock, please be care of all ratings and labels/marks of this product. Before connecting, please read the instruction manual to acquire information about the ratings.

### **Do Not Operate without Covers**

Do not operate this product when covers or panels removed.

### **Use Proper Fuse**

Only use the fuse with type and rating specified for the product.

### **Avoid Touching Bare Circuit and Charged Metal**

Do not touch the bare connection points and parts of energized equipment.

### **Do Not Operate with Suspicious Failures**

If you encounter operating failure, do not continue. Please contact with our maintenance staff.

### **Do Not Operate in Wet/Damp Conditions.**

### **Do Not Operate in Explosive Atmospheres.**

### **Ensure Product Surfaces Clean and Dry**

## —Security Terms

---

Warning: indicates that death or severe personal injury may result if proper precautions are not taken

---

Caution: indicates that property damage may result if proper precautions are not taken.

---

# Contents

I. Summary .....	6
II. technical parameters .....	6
III. working principle .....	7
IV.using method .....	7
V. note .....	12

Thank you for your automatic analyzer using open flash point you in, before using the instrument, please carefully read the instructions.

## **I. Summary**

Automatic analyzer to open flash point, flash point of petroleum products Determination of value, value. The instrument adopts electric ignition mode, without any combustible gas, fully comply with ASTM D92 (GB3536-2008), GB267-88 method. ARM series of high performance microprocessor, electric erase memory (which can be stored on a thousand data), color LCD and touch screen, PID from the whole set of the latest technology. The instrument has the following characteristics:

Very strong function. A dual-purpose machine at the same time determination of flash point and ignition point, and print the test results, with internal clock chip, automatically display the current date, time, power down to keep the.

High precision. The temperature error was controlled at 1.5, and the resolution was 0.1.\* good repeatability.

Test environment in the guarantee, consistent with 267-88 GB3536 (ASTM D92) or GB / T for continuous measurement of the same samples, both flash point value difference is less than or equal to 4 degrees centigrade.

A high degree of automation. Can automatically complete the testing process, automatic cooling, automatic information tips, etc..

Open flash point determination instrument function and performance at home and abroad and the highest level standards, oil, electricity, chemical industry, commodity inspection and other industries to replace imported products of special instruments.

## **II. technical parameters**

Range: 40 ~400

Detection type: flash point or light

Temperature test: platinum resistance

Quasi accuracy: 1

Re: GB3536-2008 (D92 ASTM), 267-88 GB/T

Display device: color liquid crystal display

Information storage: 500 measurement results can be stored

Ignition mode: electric ignition

Cooling method: forced air cooling

Printer: dot matrix printer

Self check function: lift rod, stroke, print, etc.

Power: less than 600VA

Power supply: 220V + 11V, 2.5Hz + 50Hz

Ambient temperature: 10~35

Ambient humidity: less than 90%

Weight: about 17kg

### **III. working principle**

The instrument according to the temperature curve of GB/T3536-2008 ASTMD92, GB / T 267-88 method. By the CPU control heater to heat the sample, color LCD display, temperature and setting value, the sample temperature close flash point value, CPU controlled electric ignition system, automatic ignition, automatic paddle sweep. In the flash point instrument automatic locking point value. At the same time, automatically stop heating and air cooling of the heater.

### **IV.using method**

(a) installation environment

Open flash point tester should be installed in the table without direct sunlight, without air convection on. (best placed in the hood, not a fan like).

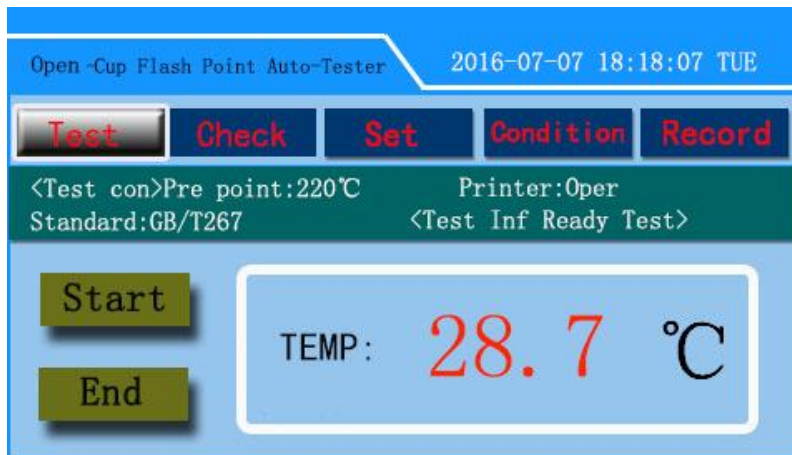
(two) power supply

The instrument uses 220V, 50Hz single-phase AC power supply, voltage fluctuations should not be greater than 5%. Electronic AC voltage stabilizer (1000W) can also be used.

(three) instrument use

1, connected to the power, the instrument will automatically lift the lifting lever, and there is a prompt tone, display instrument name and version number.

2, click on the screen at any position, display test interface:



Click on "start", the lift rod falls, start testing; click "stop", stop the test, and lift up the pole. "Test conditions" display setting of test conditions, including expected flash point, printer switch settings, test in the application of the standard. The process information of the test information is displayed on the test information.

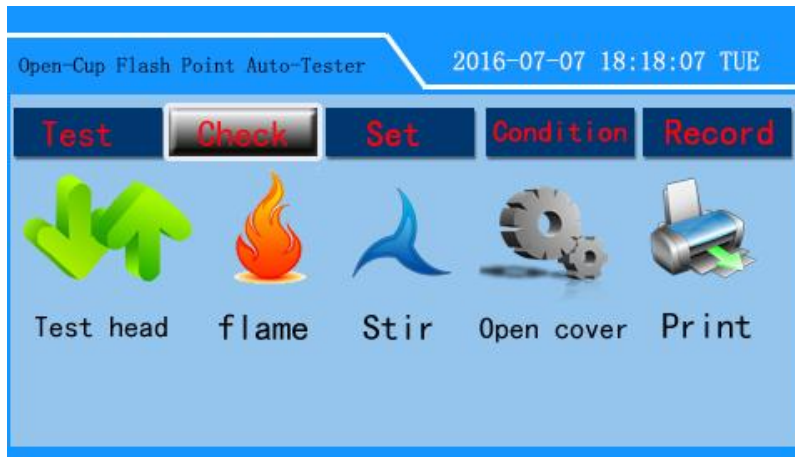
In the test interface, click on the "self test", "set", "condition", "record" and so on, can enter the corresponding function interface.

3, self check interface

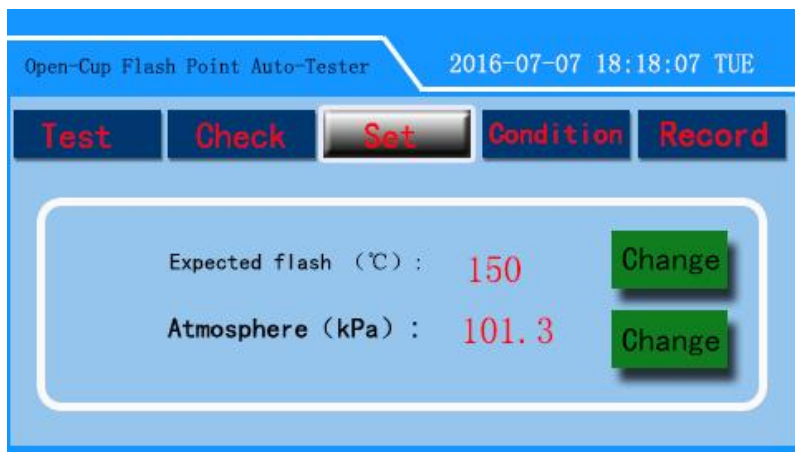
The interface can perform the self check operation of the instrument. Click the "lift lever", and the lift rod assembly is raised. Click the "light", and light the fire. Click "fans" to start the fan; again, close the fan. Click "stroke", start the stroke to the opposite side of the stroke, stop, once again, click "stroke sweep pole", stroke sweep rod back to the starting position. Click Print to start the printer to print the test to verify that the printer is working correctly (the test results in the print data are random).

In the process of performing the self-test of each component, the corresponding self-test status information is displayed in the lower part.



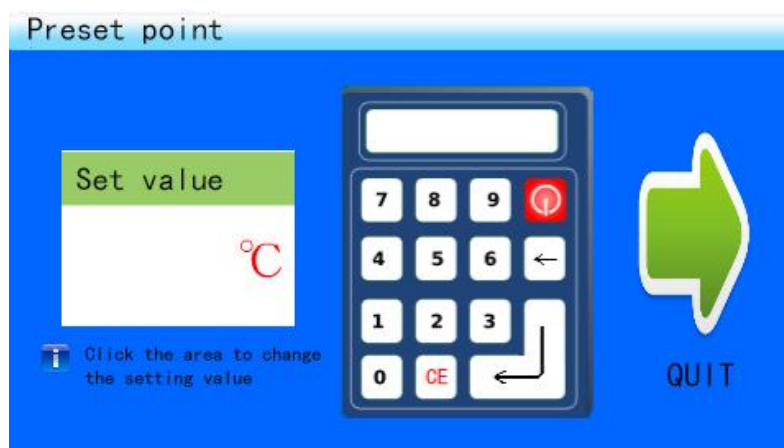


4, set the interface



The interface can set is expected to point value and the atmospheric pressure value: click "is expected to flash point" or "high pressure" of the "change", into the expected flash point or pressure setting interface:

(1) is expected to set the flash point



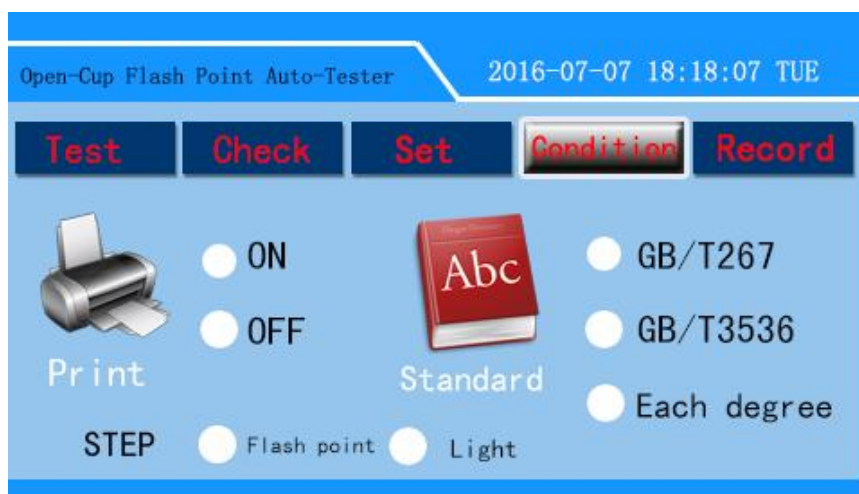
The interface, click the "Settings" regional, above the keyboard is expected to flash point set value input box at the blinking cursor, digital input, and verify input

according to the |. To delete a digital input, you can click ".". Click on the right side of the screen "exit" icon, the flash point is expected to exit the setting interface.

#### (1) atmospheric pressure setting

The atmospheric pressure of the test, the region where the value is different, can lead to test the opening point of different values, for correction to standard atmospheric conditions the accurate value of, according to the actual pressure value set. The operation method is expected to refer to the "flash point set".

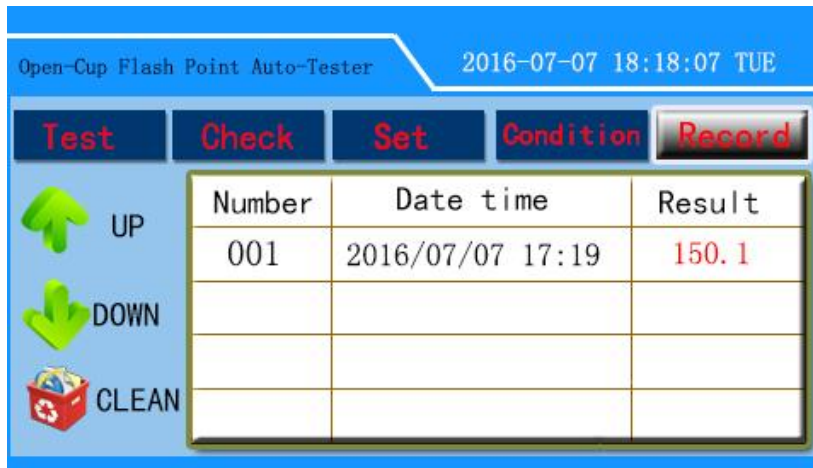
#### 5, conditional interface



The interface to the printer settings to open, close and test samples meet the standard, sample test types (flash point and ignition point, this model only with a flash point test, such as the need for ignition test please contact with the manufacturer), using standard including GB267-88 GB3536-2008, set to "every degree", after the start of the test sample, in the temperature rise about 5 DEG C, every increase of 1 degree (ignition test a and test whether the flash fire, for specimens with lower than expected lightning or burning).

Click on the appropriate area to achieve the conditions for the printer or the applicable standards and detection type.

#### 6, test record interface



The interface displays the test sample test record. "Turn", "down" button to flip the query "clear" button for empty records store all the data records. When the detection type "flash point", the temperature in the test value behind will show "s", and when type checking is the "ignition", "R".

#### 7, time setting interface

In the interface of the display real time, click the time display area, enter the time setting interface:



To adjust the date, time, click on the interface above the time display area, the keyboard input box that is to be modified to display (years, months, days, hours, minutes, seconds to show the region to?" Instead, the need to be in the order of one by one, after the number of seconds to enter the digital input, you can click on the "OK" button to complete the change. If you quit, please click Cancel ".

#### (four) sample testing

##### 1, selection test standard method:

In the "conditions" interface, select standard methods are based on a test, and set up a

good printer working state and detection of type - flash point and ignition point.

2, setting expectations, atmospheric pressure, flash point:

In the "set" screen, click on the expected flash point of the "confirmation", set the expected point value; click on the "atmosphere" "confirmation", according to the local atmospheric pressure set pressure value.

3, the sample into the sample cup, less than 210 of the sample in the upper scale, more than 210 of the sample at the next calibration line. Then, the sample cup is placed on the heater.

4, in the "test" interface, click "start", the lift rod automatically drops to the sample cup began heating. Flash point test, when the flash point, lifting rod lift automatically, showing of the tested sample is open flash point value, and print and save the test results; ignition test, flash point, are stored in the instrument and record the value of the flash point, continue the test, when the specimen combustion, save and display the value of ignition and ignition point, measurement results together with the print out.

5, take out the test cup, after the test cup and the heater cooling, can carry on the next test.

## **V. note**

1, the instrument has the best ignition device, operating under the hood (not open fan), prevent external flow caused by the test error.

2, for each sample should be open-cup clean, open-cup and heater should not have other items interval to keep good thermal conductivity.

3, lift rod not to use the hands or other items to press, lift, the stroke of the ignition rod not to push pull, so as not to cause mechanical damage.

4, ignition test, when the ignition until the lifting rod lift, paddle sweep pole homing after should be quickly with a cup cover with lid test cup mouth, until the flame is extinguished, then the cup cover is taken off and removed cup cooling.

5, when the instrument fails to work properly, can be used to check the function of the instrument, see whether it can work, do not self demolition repair.

## Six, maintenance and maintenance

1, flash fire sensor for a long time, easy to attach on oil, which will affect the detection accuracy. Often use gasoline or oil ether on the sensor for cleaning, cleaning should be very carefully.

2, the instrument is not used, please open cup out.

