

YK-0111 Closed-Cup Flash Point Tester



This instrument is primarily used for determining the closed-cup flash point of petroleum products. It features an Android system, a 10-inch industrial touchscreen control, and supports both Chinese and English languages for convenient human-machine interaction. The instrument includes power-off memory functionality, automatic ignition, display, flash point capture and printing of results, and automatic cooling. It boasts advantages such as accurate measurement, good repeatability, stable and reliable performance, and simple operation. It is widely used in power, petroleum, chemical, commodity inspection, and scientific research sectors, and conforms to the requirements of GB/T 261-2021 and ASTM D93 standard methods.

The instrument features a Chinese/English operating interface, an Android operating system, and can be connected to a mobile app for remote operation and control with real-time synchronization. Data can be uploaded to a cloud platform for computer-based data querying, browsing, analysis, and statistics. The instrument is equipped with RS232, 485 serial ports, and a USB interface for expanded PC communication.

I. Instrument Features

1. The display uses an original imported 10.0-inch true-color TFT-LCD screen; the keyboard uses a human-sensing touchscreen. The all-Chinese operating interface is clear, intuitive, and easy to use, with smooth touch control.



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2. Historical data storage uses an NVM data storage device, capable of storing 20,000 historical data points. Data can be retained for 10 years without loss, and stored data cannot be altered.
3. The printer uses a miniature embedded thermal printer, resulting in quieter, faster, and clearer printing.
4. Temperature measurement and control uses an original imported PT100 platinum resistance temperature sensor, a high-precision AD converter, an excellent linearization mathematical model, and a unique control algorithm, making temperature measurement and control faster, more accurate, and more stable.
5. Ignition uses direct electronic flame ignition, identical to gas flame ignition, ensuring safety, convenience, speed, reliability, and no interference.
6. Flash fire detection uses high-frequency ion ring flame detection technology, enabling rapid and accurate capture of the instantaneous flash fire of the sample, avoiding false detections and missed detections.
7. Atmospheric pressure measurement utilizes a fully digital atmospheric pressure sensor imported from Germany, measuring local atmospheric pressure in real time and automatically correcting for the impact of atmospheric pressure changes on the measurement data.
8. It automatically completes operations such as heating, detection, calculation, and printing.
9. The instrument heats according to the heating curves specified in ASTM D93 and GB/T261-2021. It automatically ignites when the temperature approaches the flash point. When the flash point is reached, the instrument automatically locks and displays the printed results, while simultaneously cooling the heater.

II. Technical Parameters

Display: 10-inch color industrial touchscreen

Operation Method: Touchscreen

Measurement Range: Room temperature ~ 400°C

Temperature Detection: Platinum resistance thermometer

Accuracy: $\geq 110^{\circ}\text{C} \pm 2^{\circ}\text{C}$ $\leq 110^{\circ}\text{C} \pm 1^{\circ}\text{C}$

Sensitivity: 0.1°C

Ignition Method: Electric ignition

Experimental Procedure: Three types

Cooling Method: Forced air cooling



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Information Storage: Stores 20,000 experimental results

Printer: Thermal, Chinese characters, 40 lines

Self-test Function: Test arm, igniter, printer, etc.

Repeatability: Complies with ASTM D93 GB/T 261-2021 standards

Power Supply: AC 220V $\pm$ 11V, 50Hz $\pm$ 2.5HZ

Power: $\leq$ 350VA

Operating Temperature: 10 $^{\circ}$ C $\sim$ 35 $^{\circ}$ C

Operating Humidity: $\leq$ 85%