

Dear Client

Thank you for Purchasing our **HTYND-H Kinematic Viscometer**. 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!

Company Address:

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◆ **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.

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I. Technical features and parameters

1. Technical features

HTZH-2H SF6 Dew point set is a concentration of SO2, H2S, purity and dew point analyzer at an organic whole, the original need 4 instrument to realize the function of the concentrated in one instrument. A field measurement, two indicators can be completed through testing, greatly save equipment in the gas, a measuring save two-thirds of gas consumption, reduce the user workload at the same time, improve the working efficiency.

- saves gas quickly: after boot into measurement, measurement time is about 2 min.。
- self-locking connector: the German original installation import self-locking joint, safe and reliable, no leakage.
- data storage: adopt large capacity design, can store up to 200 groups of test data.
- shows clear: LCD display directly SO2, H2S, dew point, purity and time date, etc.
- built-in power: built-in 4 Ah rechargeable lithium battery, a sufficient can work continuously for 10 hours.

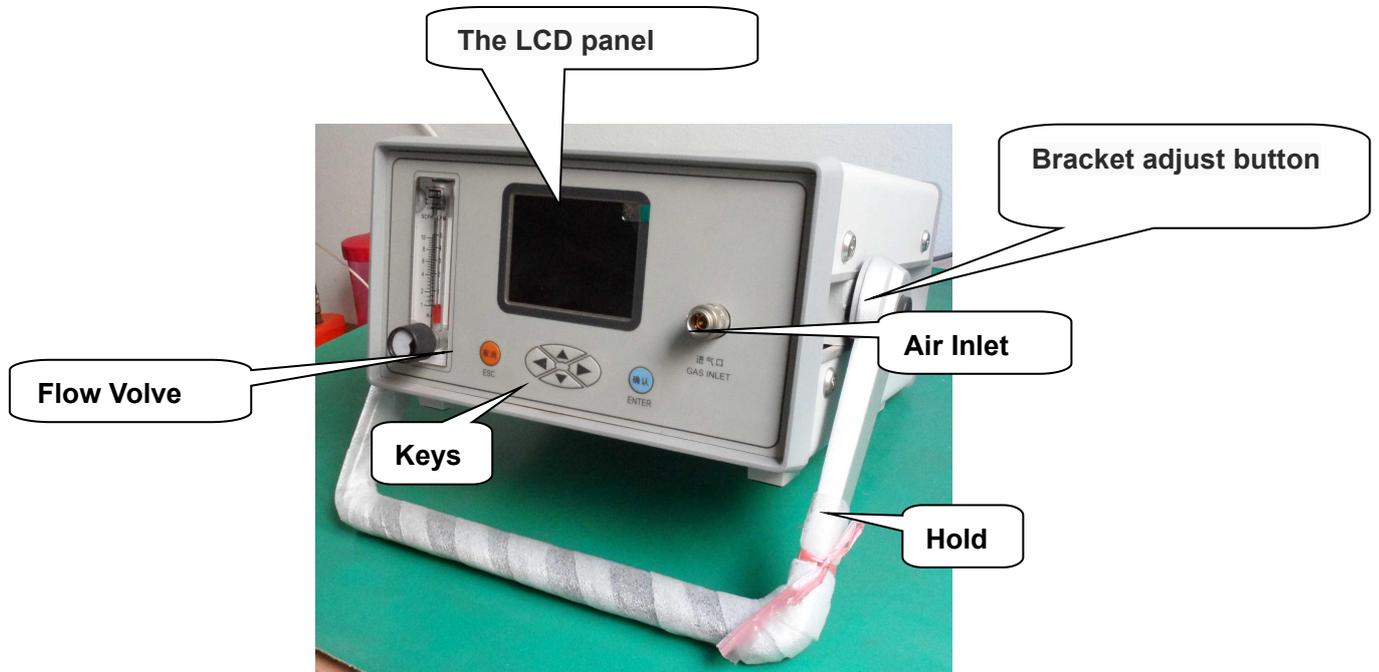
2. Technical parameters

The purity	Measuring range: 0%~100%
	Accuracy of measurement: $\pm 0.5\%$
	Measuring time: < 2minutes
Dew point	Measuring range: $-80^{\circ}\text{C}\sim+20^{\circ}\text{C}$
	Accuracy of measurement: $\pm 1^{\circ}\text{C}$ ($-80^{\circ}\text{C}\sim-60^{\circ}\text{C}$)
	Response time ($-60^{\circ}\text{C}\sim+20^{\circ}\text{C}$): 5 seconds for 63% and 45 seconds for 90%;
	Response time ($+20^{\circ}\text{C}\sim-60^{\circ}\text{C}$): 10 seconds for 63% and 240 seconds for 90%
H ₂ S	Measuring range: 0~200ppm
	Minimum quantity of detection: $\leq 0.1\text{ppm}$

	The accuracy of: $\pm 0.5\%$
	The stability of: 0~200ppm
	repetitive: $\leq 2\%$
SO ₂	Measuring range: 0~200ppm
	Minimum quantity of detection: $\leq 0.1\text{ppm}$
	The accuracy of: $\pm 0.5\%$
	The stability of: 0~200ppm
	repetitive: $\leq 2\%$
HF(optional)	Measuring range: 0~20ppm
	Minimum quantity of detection: $\leq 0.01\text{ppm}$
	The accuracy of: $\pm 0.5\%$
	The stability of: 0~20ppm
	repetitive: $\leq 2\%$
CO(optional)	Measuring range: 0~1000ppm
	Minimum quantity of detection: $\leq 1\text{ppm}$
	The accuracy of: $\pm 0.5\%$
	The stability of: 0~1000ppm
	repetitive: $\leq 2\%$
The environment temperature	-40°C ~ +60°C
Environmental humidity	0~100%RH
The power supply	AC 220V
	Built-in rechargeable battery
Battery performance	Charging time: 20 hours; Use time more than 10 hours
The weight of the	5kg
size	250×150×300mm ³
Working temperature	-40°C ~ +80°C

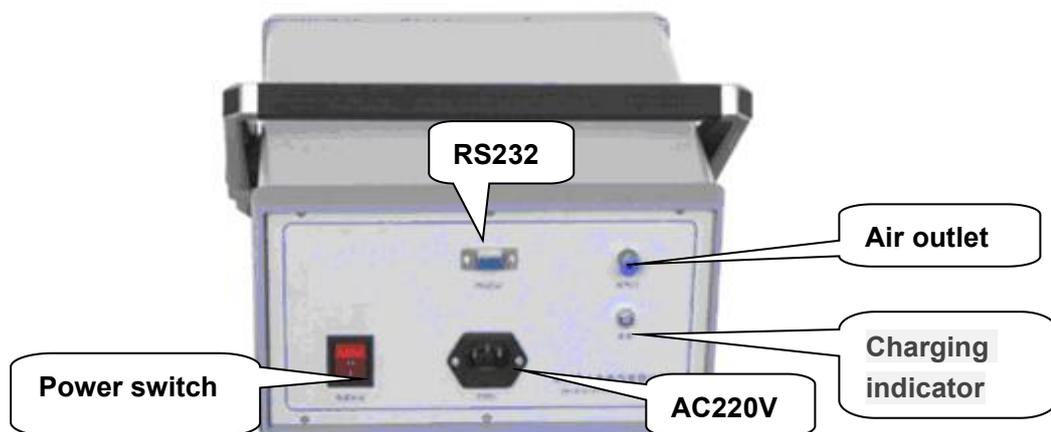
II. Introduction of the instrument panel

1. Front panel



Note: at the same time on both sides of the bracket adjust button, can adjust the Angle of the bracket.

2. Back panel



III. Method of measurement

1. Connect the SF6 equipment

Threaded end of measuring line connected to the switch connector, using a wrench to tighten, close the needle valve of measuring pipe at the other end;

Then insert the quick connector end of the test line into comprehensive tester on sampling mouth; Connect vent pipe to the outlet;

Finally connect switch connector to the SF6 electrical equipment measurement interface well, tightened with a wrench.

2. the initialization

Turn on power switch, the instrument into the initial self checking process.

3. check the battery

The instrument is recommended using alternating current (AC).

Using a direct current (DC), please check the top right corner shows the battery, if the battery is lower than about 20%, please continue to use after power off charging.

4. start measuring

After initialization self checking automatic into the instrument status (according to the "left", "right" key to switch the main measuring and setting up the pages), open the flow valve on the front panel, then adjust the needle valve of measuring piping , flow control to 2 L/M.

5. store data

After completing the measurement, the measuring data can be stored in the instrument; press "OK" button to take the operating menu, specific operation way to see the next section.

6. After finished the measurement, shut off the needle valve on measuring piping and the regulating valve on the tester

Detach the connector from the SF6 electrical equipment. If you need to continue to measure other equipment, please don't turn off the instrument power supply, according to the above steps for the next measurement.

7. After finished the measurement, turn off the tester power supply.

IV. Manipulation of the menu

During the measurement, press OK button to enter function menu, as shown in Figure 1.

1 Print
2 Save Records
3 Check records
4 Delete record
5 Modify time

1. print (optional)
2. keep records,

In measuring state, by pressing the "ok" button to enter the function menu, press the "up", "down" key to choose "save record" menu, press the "ok" key, enter the page of saving data, save the data, can be numbered according to the equipment. Equipment serial number for a maximum of five, can pass "up", "down" key to increase the numerical size, the "left", "right" key to adjust data digits. After input number, press "ok" button, save the data after the page automatically return measurement, press the "cancel" key can return function menu, don't save the data at this time.

3. check records

In measuring state, by pressing the "ok" button to enter the function menu, press the "up", "down" key to select "check records" menu, press the "ok" key, to enter the page of check records.

According to the starting from the last saved data.

Can press "up", "down" key to check through the data

4. delete records

In measuring state, by pressing the "ok" button to enter the function menu, press "up", "down" button "delete record" menu, press the "ok" key, can erase

all the data. Press "cancel" button can return function menu, this time not to delete data.

5. Modify time,

In measuring state, by pressing the "ok" button to enter the function menu, press the "up", "down" key to choose modify time, press the "ok" key, enter the page of modification time, can be modified in years, months, days, hours and points, as follows:

"Up" and "down" button to increase or decrease values, "left", "right" button can change the position shift to the left or right. Modify finished, press the "ok" key is saved automatically return after the modification of value measurement page, press the "cancel" key is to give up and modify the value automatic return to the menu.

V. Notes

1. Instrument should be placed in a safe location to prevent broken, avoid violent vibration.

2. Before using, should be timely to recharge.

3. charging just access to the power cord to the 220V socket, without having to open the power switch, the instrument will automatically charging, charging time generally need more than 20 hours.

4. When do not use the tester, should place the instrument in special cases to avoid dustproof, moisture.

5. Instrument with a standard gas calibration once a year. Can be sent to the manufacturer or authorized unit for calibration, in order to ensure accuracy.

6. When detecting gas concentration of SO₂, H₂S is high, remaining gas in the airway should be excluded before the next measurement.

7. When checkout equipment of SO₂, H₂S concentration exceeds normal, suggest measuring twice to confirm the results.

VI. The common failures and troubleshooting methods

The fault	Possible causes	Processing method
SO ₂ ,H ₂ S,no change	Gas without into the detector	Check the gas circuit connection
	The sensor cable open-circuit	Check the connecting cables
	The sensor failure	Replace the sensor
	No decomposition products in the gas	normal
SO ₂ ,H ₂ S,detection value is low	The internal gas path with leakage	Check gas path
	Low sensitivity	Send to the manufacturer for calibration
	The sensor failure	Sent to the factory for repair
SO ₂ , H ₂ S, detection value is high	High sensitivity	Send to the manufacturer for calibration
When testing SO ₂ , H ₂ S,unstable readings	Filter failure	Sent to the factory for repair
	The sensor failure	Sent to the factory for repair
	Circuit fault	Sent to the factory for repair
Charging indicator light is not bright	Circuit fault	Check the circuit
	The battery voltage is too low	charging
Buzzer not ring	Buzzer fault	Replace the buzzer
	Circuit fault	Check the buzzer circuit
Buzzer ringing non-stop	Circuit fault	Inspection equipment
	The sensor output line loose	Check the sensor cable
	Emergency alarm is set too low	Re-calibration setting
No display LCD	The LCD connection is bad	Check the connecting cables plug
	The battery voltage is lower than 5.8 V	Charge or replace the battery
	Circuit fault	Send the factory maintenance