

Dear Client

Thank you for Purchasing our **HTJY-80B Transformer Oil BDV Tester (Single Cup)**. 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:

- ◆ T4, No. 41, High-tech 2 Road, East Lake High-tech Development Zone, Wuhan
- ◆ Sales Hotline: 86-27- 87457960
- ◆ After Service Hotline: 86-27- 87459656
- ◆ Fax: 86-27- 87803129
- ◆ E-mail: qiao@hvtest.cc
- ◆ Website: www.hvtest.cc

◆ **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. Brief introduction

This instrument is designed comply with IEC-156 and according to the feedback from the users.

This tester is controlled by MCU. It makes the tester can be operated automatically according to the presetting on the controlling panel. The whole process is controlled by the MCU, simply and convenient.

II. Features and Applications

The tester is designed to test the power strength of all kinds of insulating oil. Its features are shown as following:

1. The tester has auto-check function. It will reset the power to 0v automatically, when power on.
2. A TPU—A panel type printer is adopted to print test report.
3. According to the user's requirements, the testing times, the time for stirring and stillness, and the notice method all can be set on the controlling panel.
4. The magnetic shaker is adopted to stir the oil sample. It makes the oil mixed well and no bubbles.

III. Technical specifications

1. Power supply: AC220V $\pm 10\%$, 50HZ $\pm 5\%$
2. Testing range: AC 0-80KV
3. Rating current: 10.5mA
4. Accuracy: 1.5%
5. Speed of pressure regulation: 2.5KV/S $\pm 10\%$
6. Presetting options:
 - Testing counts: 1-9
 - Time of stirring: 0 sec to 1:39 sec.

Time of Stillness: 0 sec to 10:39 sec.

7. Operation temperature: 0°C – 35°C

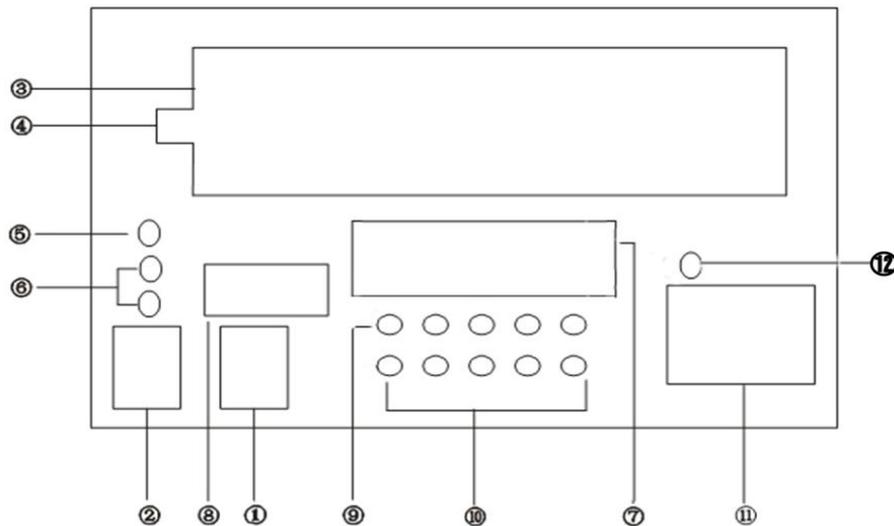
Relative humidity: ≤75%

8. Oil cup space: 2.5mm (diameter of the oil cup's clearance gauge)

9. Volume: 415×315×315mm³

10. Weight: 28kg

IV. Panel illustration



Picture 1: Drawing for Panel

1. Power switch
2. Power supply socket
3. HV chamber
4. Chamber lock
5. Earth
6. 3A Fuse
7. Display screen
8. Timer
9. Indicator light
10. Function buttons
11. Printer
12. Printer switch

V. Operation steps

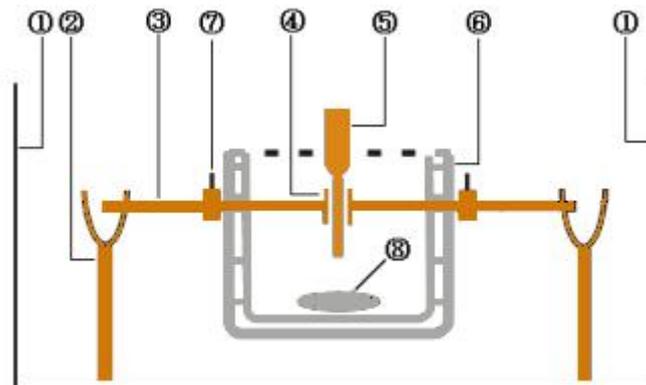
1. Input power supply

Connect the earth safely, plug in 220 V AC power supply. Note: Make sure that the Neutral on the left and the line on the right.

2. Take oil sample

2.1 Make the distance of the two electrodes in the oil cup to be 2.5mm; counterclockwise screw off the clearance gauge stick at one bottom of the oil cup axis pole. Make the other electrode stay in the middle. Tighten the bolt to make the axis pole tightly. Take the clearance gauge stick out of the two electrodes and make it very close to the two electrodes, then lock the bolt and take out the clearance gauge. as shown in Picture 2.

2.2 Clean the oil cup, put the cleaned Magnetic shaker into the oil cup, flood the cup with the sample oil. Take down the cover of the chamber and put the oil cup between the two HV terminals of the HV chamber. Then cover the chamber and lock.



Picture2. Layout of HV Chamber

- 1). HV chamber
- 2). HV terminal column
- 3). Axis pole
- 4). Electrode
- 5). Clearance gauge

- 6). Oil Cup
- 7). Bolt for fixing the axis pole
- 8). Magnetic shaker

3. Presetting of timer

The timer is combined with six columns as listed below.

Counts	Timer				
	Stirring		Stillness		
-	-	-	-	-	-
6	6	0	5	0	0
+	+	+	+	+	+

①
②
③
④
⑤
⑥

Picture 3 Timer

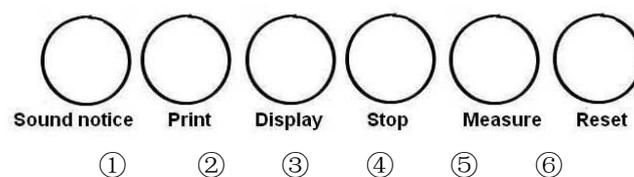
Column ① is for you to choose how many times you want to test. Press + or - , you can choose any figure from 1 to 9.

Column ②③ are for setting the stirring time. Column ② is for one “ten seconds”, and column ③ is for one second. 1:39 seconds is displayed as 99 seconds on the panel.

Column ④⑤⑥ are for setting the stillness time. Column ④ is for one minute. Column ⑤ is for one “ten seconds”. Column ⑥ is for one second, 10:39 seconds is displayed as 999 on the panel. That means 9 minutes + 60 seconds + 39 seconds.

4. Function button operation

There are six function buttons. The tester will act by touching the keys without any confirmation.



Picture 4 Function Keys

① Sound notice, ② Print, ③ Display, ④ Stop, ⑤ Measure, ⑥ Reset.

- 4.1 When test, press the button “Measure”, the action of stirring, stillness, voltage up and printing will start one step by one step automatically.
- 4.2 Press the button “Stop”, during the voltage up, the tester will stop the voltage up action and keep supplying the voltage to the oil cup. The figures appear on the Display is the voltage value of the terminal connected to the oil cup. Keep pressing the button, you can turn down the voltage of the oil cup. Touching the button “stop” won’t confuse the testing order. You can let the tester recover by pressing the button “Measure” again.
- 4.3 The sound notice will keep a short sound “Di” for 20sec to notice, after the sample oil is breakdown by first time. After the second breakdown, it will cause “Di” twice shortly. The sixth breakdown will cause a long sound “Di” and a short sound “Di”. The seventh break down will cause “Di” a long sound and two short sounds. When the average value appears, it will keep “Di” for 20 seconds without a stop. If you do not need the sound notice, press the button “Optic notice”, the test will notice by led flashing. The flashing frequency is the same as the sound. If you press the button “Sound notice” again, it won’t work. You should keep the optic notice till next power on.
- 4.4 After testing, if you want to check the testing result again, please press the buttons “Display” or “Print”, Each pressing of the button “display”, the tester will display the testing value on the display from the 1st test to the average value one by one.
- 4.5 When press the button “reset”, the letters “OCPU” will be displayed on the display, it means that the tester is reset. During the voltage up, the button “reset” is not enabled by single pressing. It will reset only if you double press the button “reset”.

5. Turn on and standby

Turn on the switch. The test will start to self check, and to adjust the testing voltage to be 0. After the self checking, the letters “OCPU” will be displayed. If the letters “DIJJ” is displayed, it means the tester is in self checking.

6. Measuring

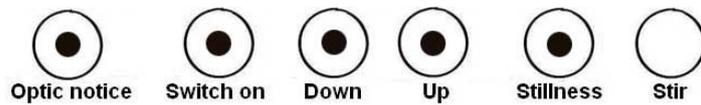
6.1 Press the button "Measure", the tester will work according to the preset testing values. When stirring, the indicator light "Stir" will be on, the magnetic shaker will turn around. The 1st segment of the display shows the test counts. The rest 3 segments shows the time of stirring. After stirring, the magnetic shaker stops stirring, and the indicator light "Stir" is off. And then the indicator light "Stillness" will be on, it starts to stillness. After the stillness the indicator light "Stillness" is off and the indicator light "Switch" and "Up" are on. The last 3 segments of the display will start to display the current voltage of the oil cup (00.0KV). When the sample oil is breakdown, the tester will switch off the power supply and the display will stop for 5 seconds. The printer will print out the time and the breakdown voltage. The tester will turn down the voltage, the indicator light "Down" will be on. One test finished.

6.2 The stirring indicator will be on again and the second test will start. After all tests are done, the tester will calculate the average testing value. The testing counts is showed by in English letter (A, B, C, D, E, F, G, H), if you test only once, it shows A24.3KV, if you test six times, it shows F24.3KV. Then print the average value. The whole test finished.

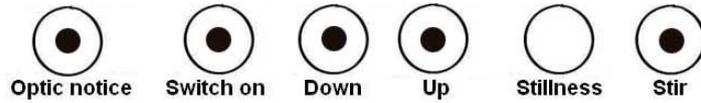
6.3 At the moment you can check the testing value and print repeatedly. All value will be deleted by pressing reset button.

6.4 When the OPCU is displayed, you can take out the sample oil. And you can use new sample oil to test again. After finish the testing, put the switch to "OFF" to turn off the tester.

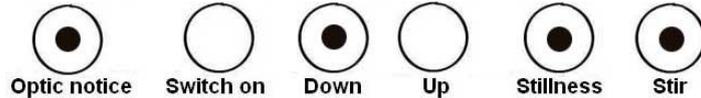
6.5 When testing, the indicator lights will work as shown below.



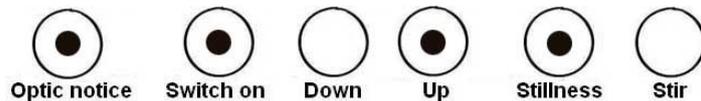
The "stir" indicator light is on when stirring.



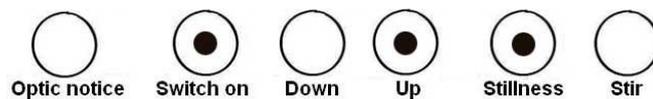
The "stillness" indicator light is on when stillness.



When the voltage is going up, the "up" and the "switch on" indicators are on.



When the sample oil is breakdown, the voltage goes back to 0v. The "down" indicator light is on. At the same time the next stirring time begins, and the "stir" indicator light is on.



When the sample oil is breakdown, you may choose the optic notice, and the "optic notice" indicator light is on.

VI. Security attentions

1. As the tester is a professional insulating oil dielectric strength tester, do not use it for anything else. Only the professional repairer can open the case to repair.
2. Earth well in using.
3. When the voltage is going up, never touch the tester in order to avoid the danger.
4. Do not use the oil cup to be any other usage.

VII. Maintenances

1. After testing, clean the cup by oil. Use a piece of chammy piece of silk cloth to clean the surface of the electrodes to keep them bright and clean. Fill full the oil cup with clean and dry oil to protect it.
2. Use and store the tester in a dry, aeration place.
3. This is a guarantee period of the tester is one year. We provide free repair for any quality problem.
4. During the guarantee period, as you operate improperly or do not take good care of it to make the tester something wrong, we company can supply some parts cheaply or help you repair it.
5. When using it, if you find something unusual or you need a technique consultation, please contact with us.

VIII. Packing list

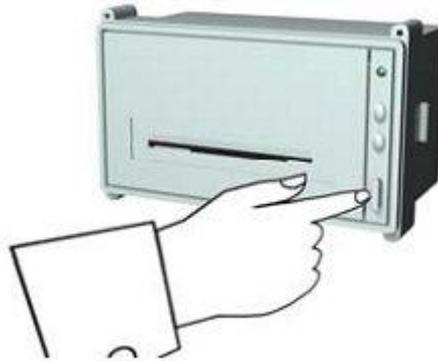
1.Host	1
2. Oil cup	1
3. Power cord	1
4.2.5mm Staff gauge	1
5. Magnon	2
6.Groud wire	1
7. Roll stationery	2
8. Fuse	4
9. Instruction manual	1
10. Report	1
11. Certificate	1

Appendix:Printer User Manual

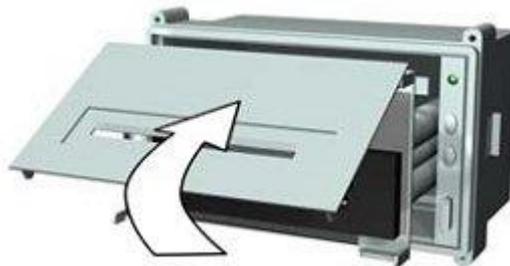
1. The printer is operated automatically. The manual operations are only for changing ribbon and paper roll.

2. Change ribbon

2.1 Press the button on the panel and open the cover. See picture 2-1

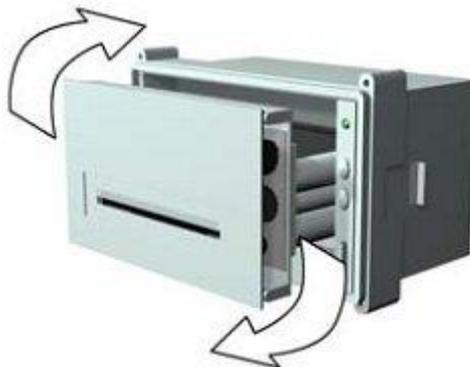


2.2 Remove the cover and make the front part of the machine appears. Then you can change the ribbon there. See Picture 2-2

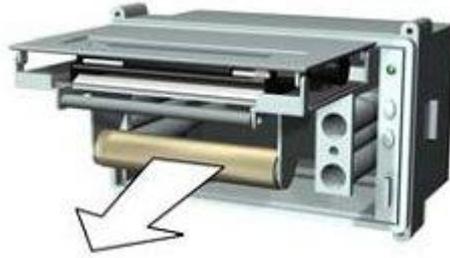


3.Change paper roll

3.1 Uplift the front part of the machine. See Picture 2-1 and 2-3



3.2 Take off the axis of the paper roll. See Picture 2-4



3.3 Put the new paper roll on the axis. See Picture 2-5



3.4 Presses the button and make the printer start working. Put the front of the paper to the exit of the printer. The paper will move automatically till the head out of the crack. Then press the button again to stop the printer. Recover the cover. See Picture 2-5 and 2-6.

