# ZXJYD-IV Automatic Insulating Oil Dielectric Strength Tester

# Contents

# 1 features

(1) AC220V input

(2) Output voltage：AC 0V~80KV

(3) Rate of voltage rise: 2kV/s±10%

(4) Max test times: 9

(5) Stir time: 0~999s

(6) Wait time: 0~999s

(7) Test error: 3% max in the range of 10kv~80kv

(8) Weight 28kg

(9) Size:420 mm*380mm*410mm

# 2 TEST OPERATION

## 2.1 TEST PROCESS

If you want to do a test with ZXJYD-Ⅳ Semi Automatic Oil Tester, you'd better operate in accordance with the process as follows:

1 Tie the earth ground to the tester

2 Place the Magnet to the oil cup in the state of no power supply

3 the samples should be placed in the laboratory for a period of time Without Destruction of the original package until the temperature of samples are close to the laboratory. Put sample into the oil cup and then Shake oil cup gently to clear it for 2 or 3 times.

4 In order to prevent bubble, sample should be Put into the oil cup along the wall down slowly while there is no o touch with the electrode, sample and internal of oil

cup. Power supply must be cut off at the whole process.

5 In the state of no power supply, put the cover on the top of two electrode of insulation. And then cover the high voltage door of the tester.
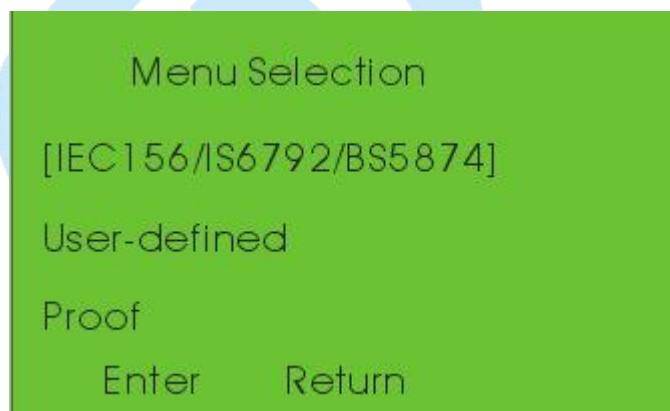
6 Open power supply, then you can see picture 1 at the screen. It is the main menu of tester.

7 Rotate the input switch you can select different items of the menu.



Picture 1 Main menu

8 select the item "Test Cycle", you will see picture two. It is the test selection menu.
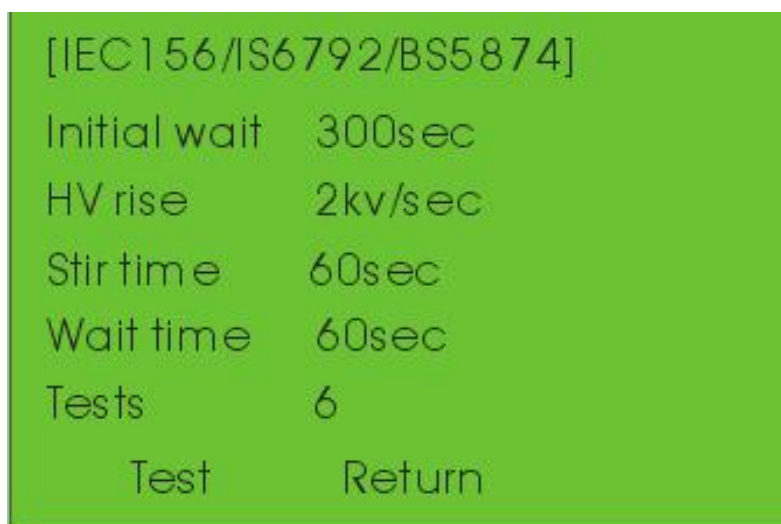


Picture 2 Test selection menu

**2.2 IEC156/IS6792/BS5874 TEST**

The First item of the test selection menu is IEC156/IS6792/BS5874. When this item is selected, tester will be start will fixed parameters as picture 3, The value of the parameters are "300s initial time", "60s stir time" and "60s wait time". The process

and the test result are similar to user-defined .The test result of IEC156/IS6792/BS5874 include breakdown voltages, average voltage of breakdown voltages and standard deviation. After this test is completed, you can print or save the test result.



Picture 3 Parameters setting of IEC156/IS6792/BS5874

**2.3 USER-DEFINED TEST**

The second item of the test selection menu is User-defined. When this item is selected the initial wait time, stir time, wait time, numbers of test can be setup.

1 when User-defined test is selected picture 4 will be shown at screen.

2 the value of stir time could be adjusted in the range of 0~999s.

3 the value of wait time could be adjusted in the range of 0~999s.

4 the value of test numbers could be adjusted in the range of 0~9

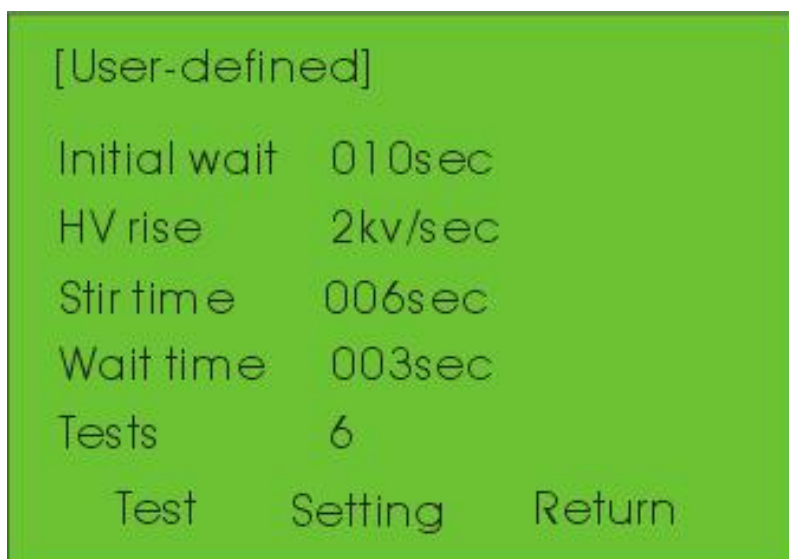5 after the completion of parameter settings, Picture 5 will be shown at the screen.

6 select button "Run", test will be started.

7 The tester wait for the time of "Initial wait time" at first, then the output voltage rise according to 2kV/s until sample was breakdown.

8 the tester stirs the sample for the time of "stir time" and wait for a time of "wait time" after the first breakdown. Then output voltage rise again until breakdown.

9 when all tests are finished, picture 6 is shown at the screen. The content of the picture include breakdown voltages and average of breakdown voltages.
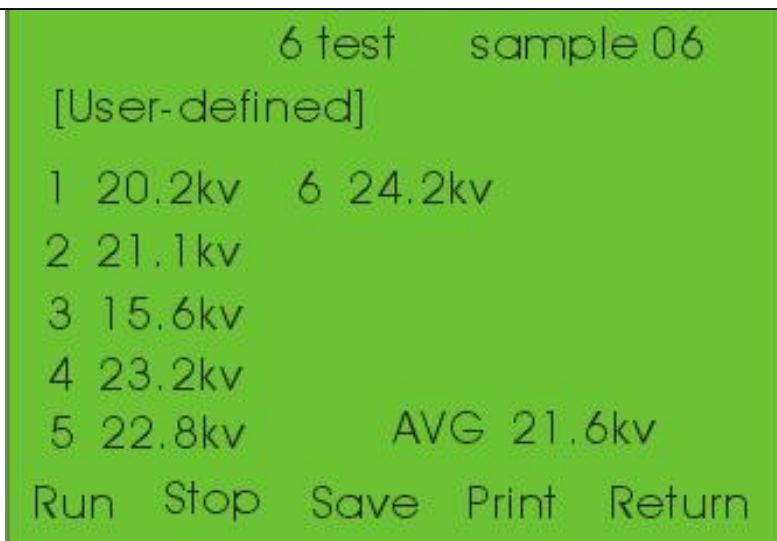
10 After this test is completed, you can print or save the test result.



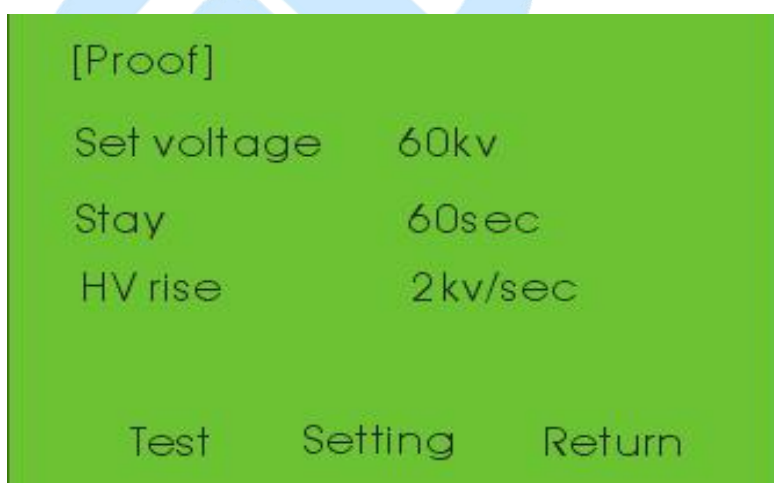Picture 4 Parameters setting of User-defined



Picture 5 IEC156/IS6792/BS5874 operate menu
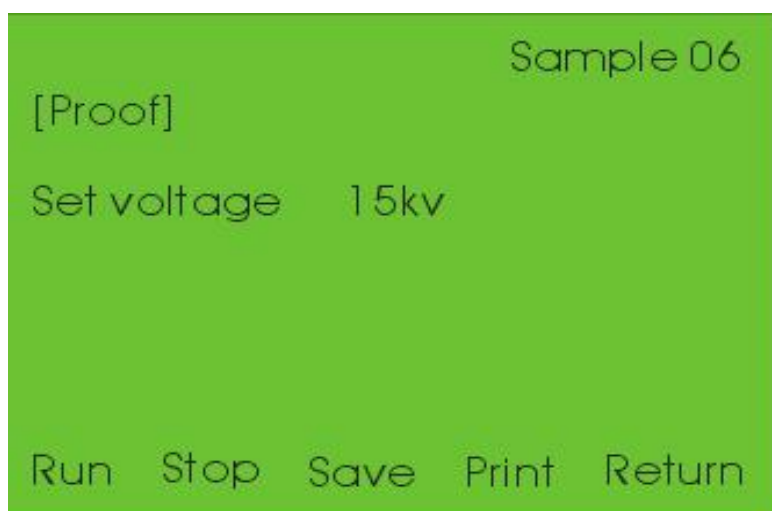
Picture 6 User-defined test result

## 2.4 PROOF TEST

The process of proof test if different with user-define and IEC156/IS6792/BS5874. Both User-define and IEC156/IS6792/BS5874 get a breakdown voltage of a sample. For the proof test., the main object is to find whether the sample will be breakdown at a set voltage for some time. When the proof test is selected picture 7 will be shown at screen.
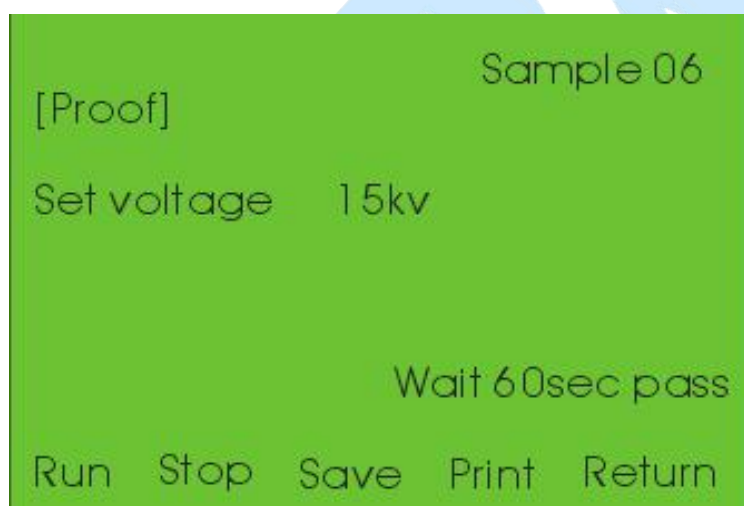


Picture 7 Proof test set up

The parameters need to be adjust is set voltage and stay time. After the completion of parameters setting, picture 8 will be shown at screen.

Picture 8 Proof test operate menu

If button "Run" is selected, tester output a voltage which is close to set voltage. Then stay for "stay time". If there is no breakdown, picture 9 will be shown at screen.



Picture 9 result of proof test

If the sample was breakdown, the breakdown voltage will be record and picture 9 show test failed.
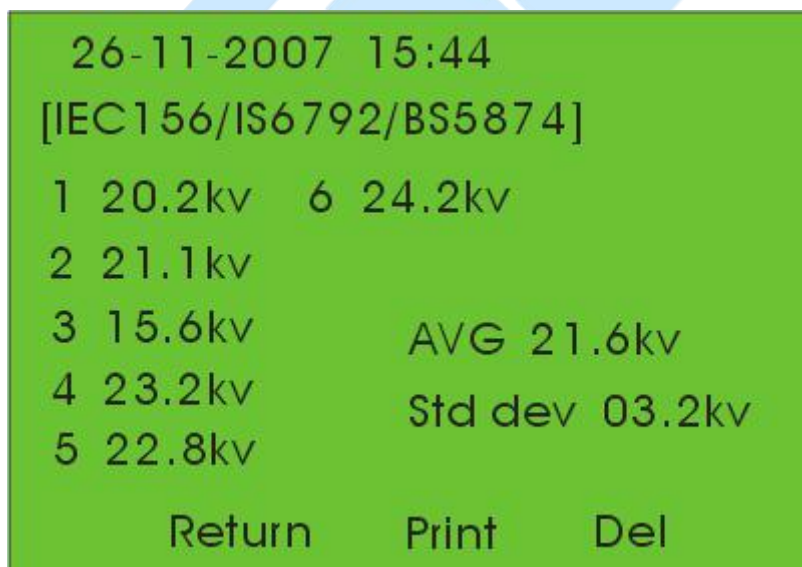
**3 SAVED DATA**

The second item of the main menu is Saved data. When this item is selected, Picture 10 will be shown at screen. You can view the data you had saved again through this

function. Rotate the input switch you can get the index of saved data while the time and date of data saved will be shown at picture 10. Put down the input switch the data you have selected will be shown as picture 11. It is similar to the test result of user-defined or proof test.
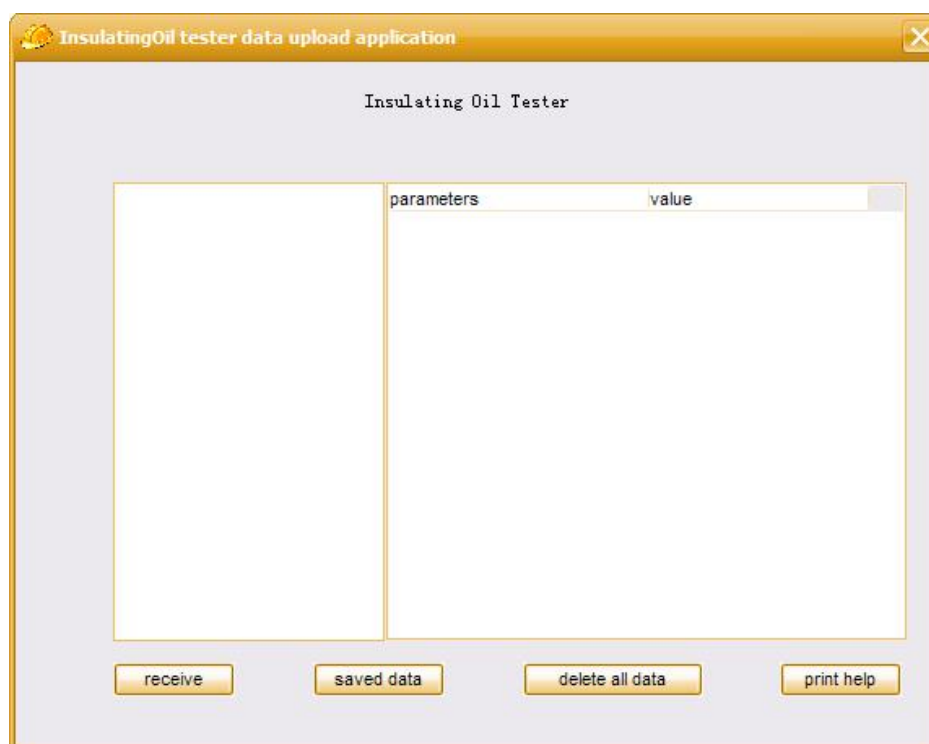


Picture 10 Saved data selection



Picture 11 result of saved test

**4 time and date set up**

The third item of the main menu is day date time setting. Select this item. Then Put down or rotate input switch the value of time and date will be changed.

## 5 PC Connection

All data saved in the tester could be uploaded to personal computer by a application provided by GDZX electric power science&tech co.,ltd. Picture 12 is the UI of the application for ZXJYD-Ⅳ insulating oil tester. Click on the button receive data form the tester. And then all data will display on the frame of the application.



Picture 12 application of ZXJYD-Ⅳ Insulation oil tester

**Be careful:**

**1 If the tester shows the text "door open, please close the door", it is mean that the test is paused. You must close the door for safe. Otherwise the tester will not work.**

**2 It is very dangerous that open the insulating door when the test is working.**