Vickers Measurement Software
iVicky V3.0
Operation Manual

Sinowon Innovation Metrology Manufacture Limited

www.sinowon.com

Contents

1 Software Introduction

1.1 Function

Hardness measurement software V3.0 iVicky mainly to realize the automatic measurement function of Vivtorinox hardness based on video image.(Customizable brinell hardness function) V3.0 iVicky connected to control hardness tester equipment, through the industrial camera for indentation image, it can automatically measure vickers hardness and generate measurement data report output. Measuring process is simple and quick, accurate and stable measurement result.
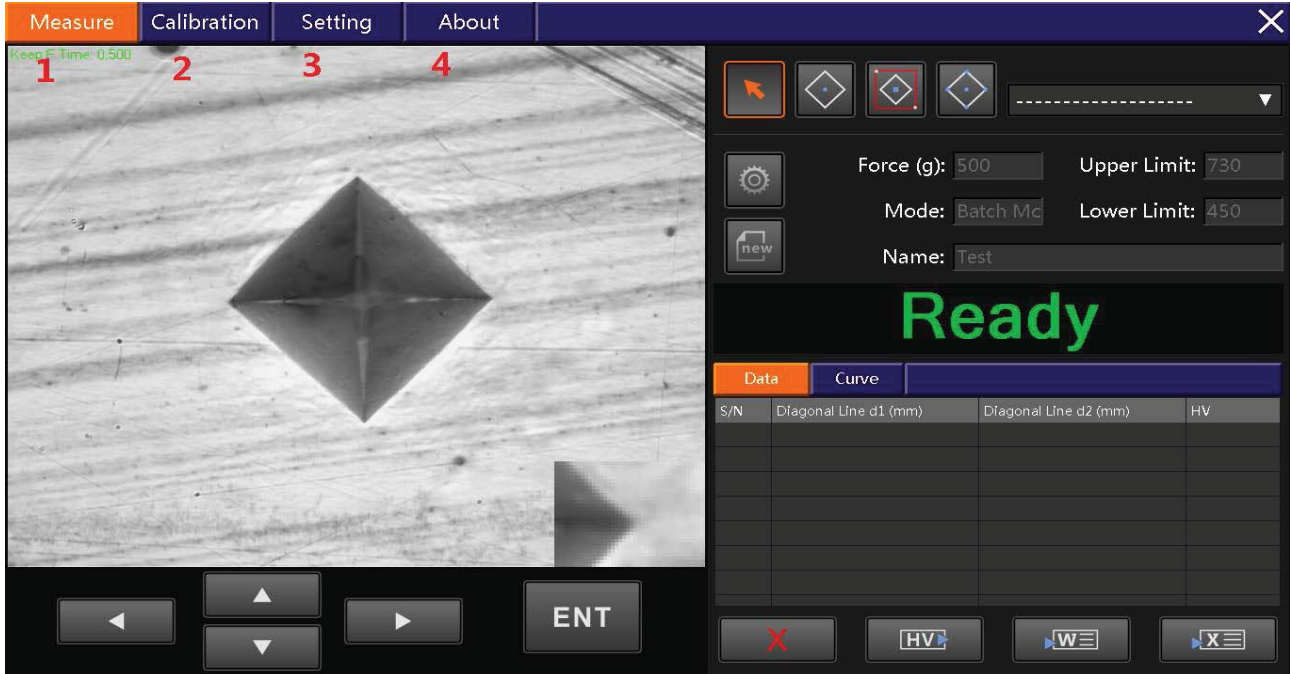
1.2 Operation Environment

Operation System：Microsoft Windows XP/ Windows 7/ Windows 8/8.1 / Windows 10(32/64 bit)

# 2 Interface Introduction

2.1 Main Menu

1. Measure Page; 2.Calibration Page; 3.Setting Page; 4.About Page.

2.1.1 Measure Page

The Ivicky3.0 Measure Menu is realized the testing of Vickers Hardness, setting the measure parameter, display the test data and output the result of testing.

Including Six Region: 1. Video; 2.Measuring Instrument; 3.Calibration; 4.Setting and display the parameter of measure; 5. Display testing result and output; 6.Operating Measure.
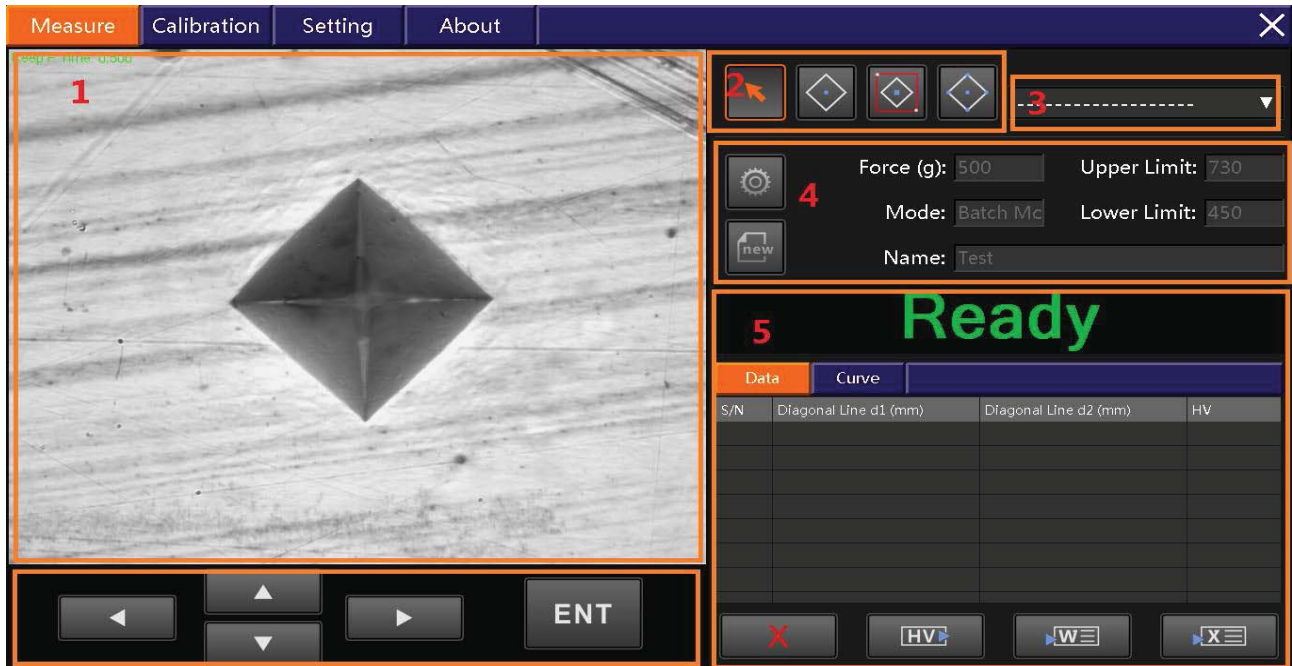
1) **Video Display**

Display the real-time image of indentation, It is capable of setting point and testing on the region and confirmation the result of measurement

2) **Measure Instrument**

- Auto measure diamond: Click "ENT", the system could automatic find the four point of diamond shape and measurement.
- Frame select diamond: During the video region select diamond shape then click "ENT", the system could auto finding the four point of diamond shape and measurement.
- Select four point measure diamond: During the video region, click the four point of diamond shape then please click "ENT", confirm measure diamond shape.

3) **Calibration Option**

Option different magnification calibration (this magnification have been calibrated)

4) **Vickers Measurement Setting**

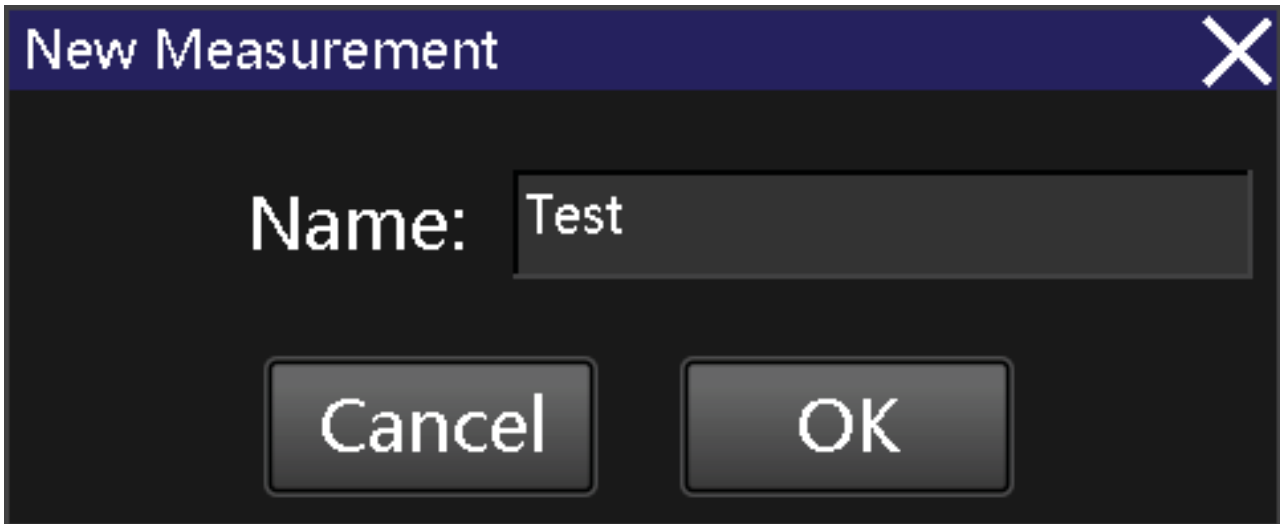Including setting parameter and building new measure

- Setting Parameters

Please click "Parameters" as follow include Indentation Force, Conversion Standard, Dwell Time, Upper Limit, Lower Limit, Mode, Average.
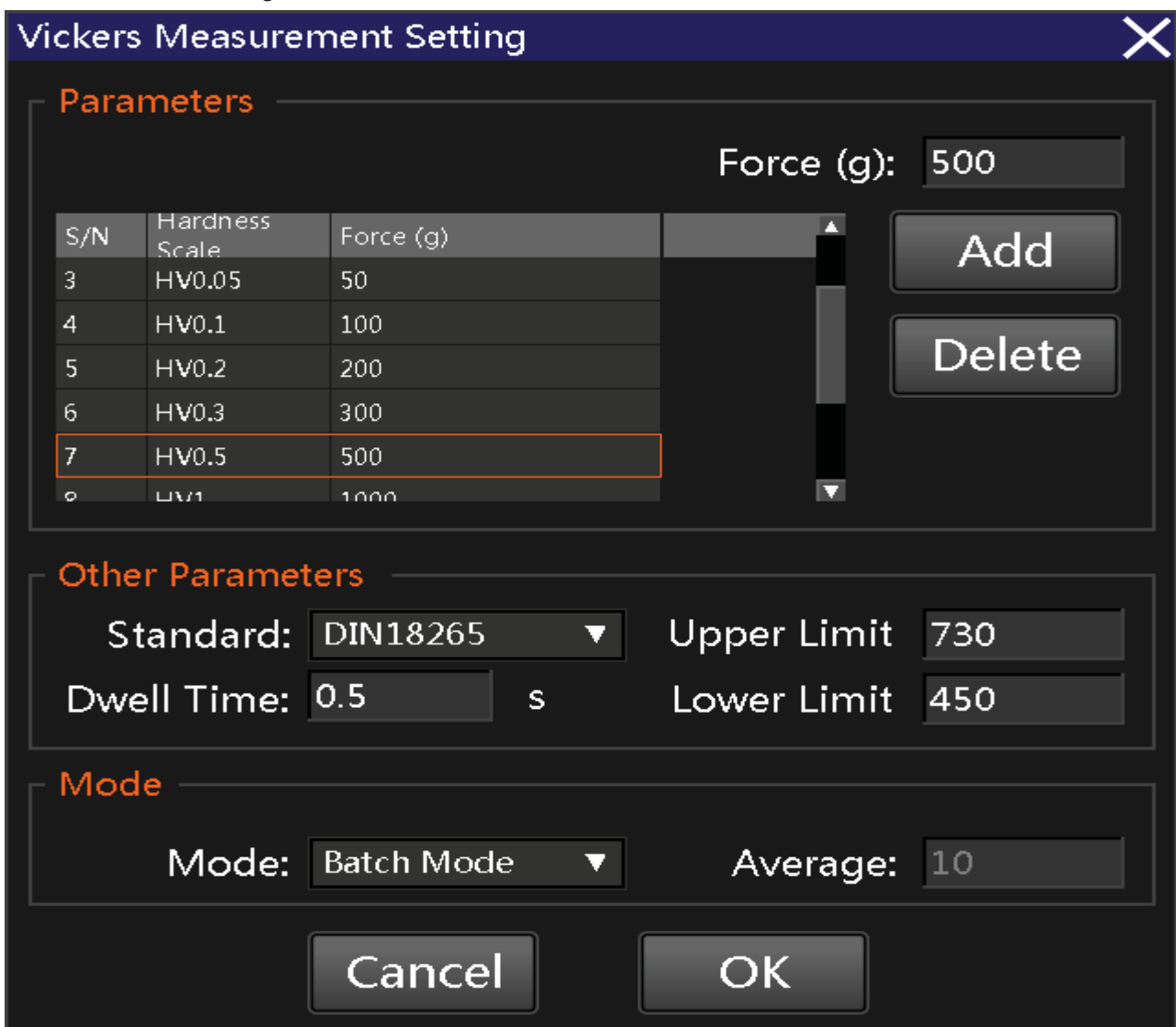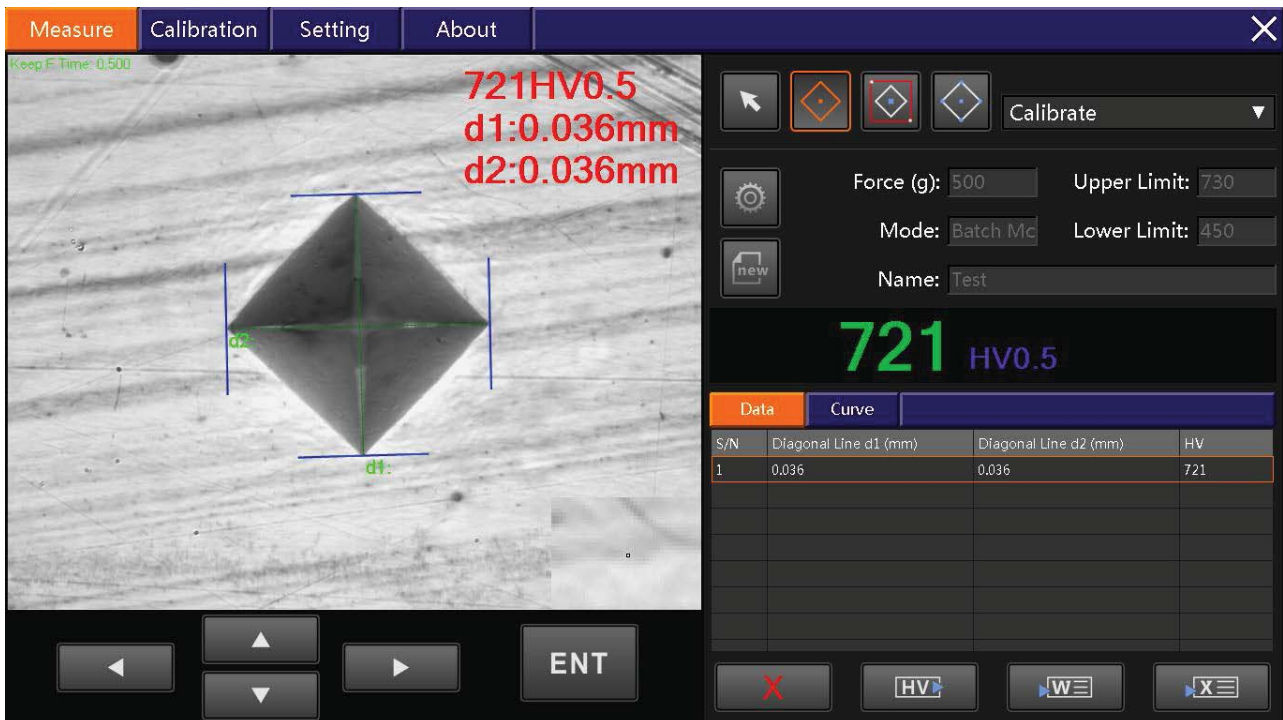
● New Measurement

Click New Measurement as follow:

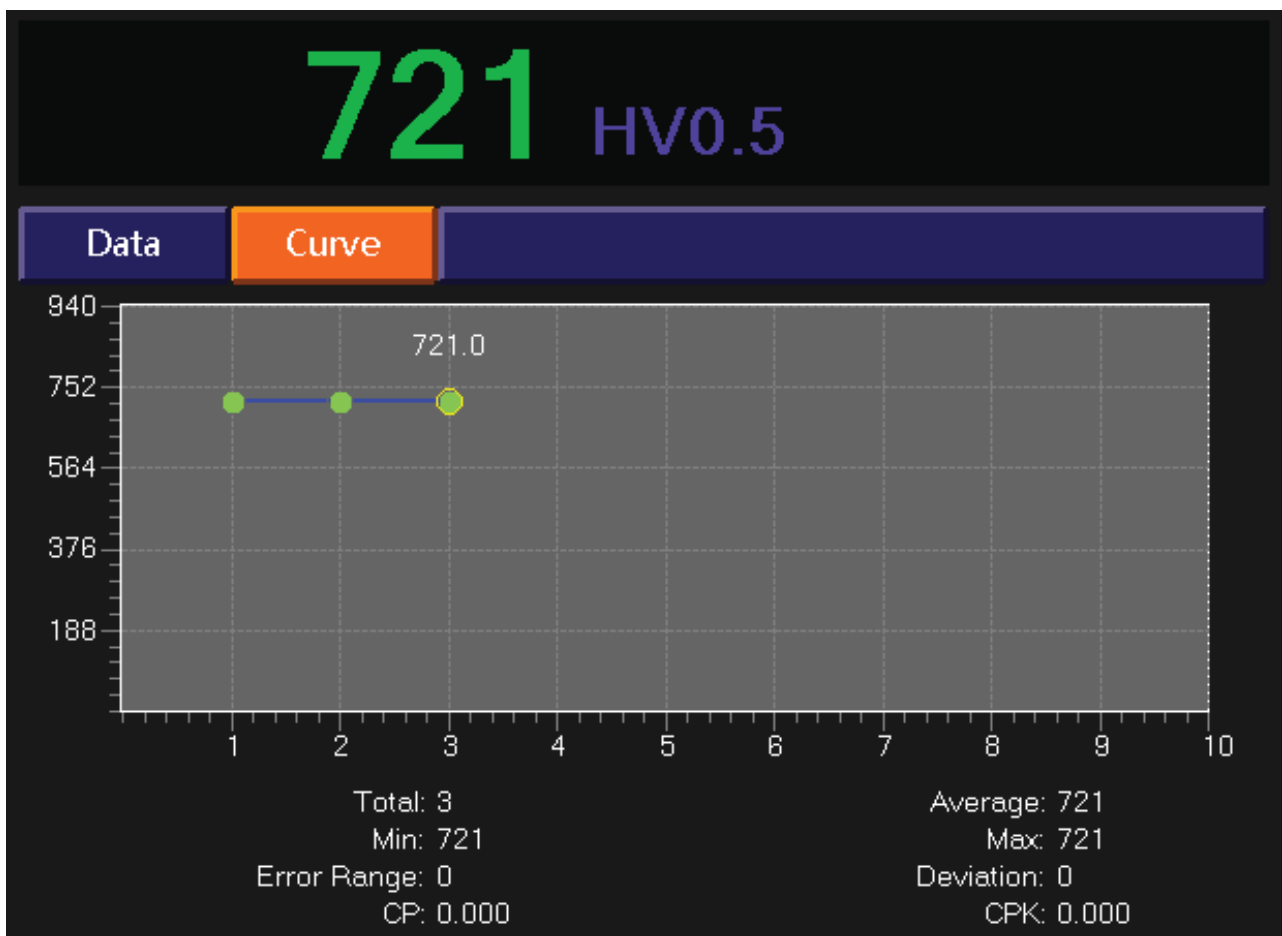**5) Display Measure Result and Output**

● Delete

Delete last record

● Hardness Conversion

Click Hardness Conversion as follow (contain 17 Hardness Content):

- Output Word and Excel Data
- HV Curve is display the measurement result by curve, include CPK and Error range CP etc. as follow.
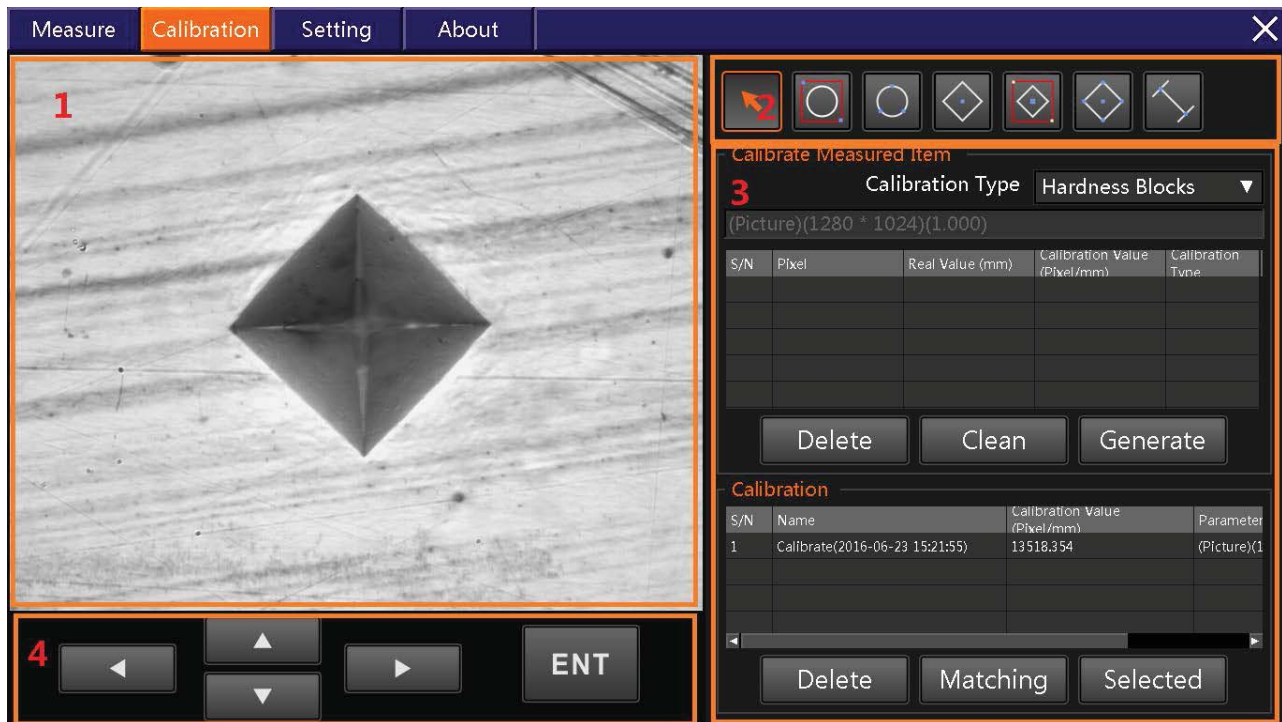
6) Operation Menu

This region main measure, UP and Down, Lift and Right could control the measure points, ENT mean confirmation measurement.

2.1.2 Calibration Page

This menu mean calibrate the different magnification.(It is important to make sure calibration accuracy).
1.Video; 2.Testing instrument;3. Calibration operate 4. Measure operate

1) Video Display

Display the real-time image of indentation, It is capable of setting point and testing on the region and confirmation the result of measurement

2) Measure Instrument

● Select measurement roundness: during the video display region please select circular and click the right. Then measure circular diameter.

● Three point drawing circular: click three point and click right .

● Auto measure diamond: Click "ENT", the system could automatic find the four point of diamond shape and measurement.

● Frame select diamond: During the video region select diamond shape then click "ENT", the system could auto finding the four point of diamond shape and measurement.

● Select four point measure diamond: During the video region, click the four point of diamond shape then please click "ENT", confirm measure diamond shape.

3) Calibration Operate

● Calibration Method: By calibration screen and HB block.

● Calibration Item: One testing data one item.

● How to creative calibration: By testing item and AVG.

● Calibration: a camera and a magnification correspond a calibration record.

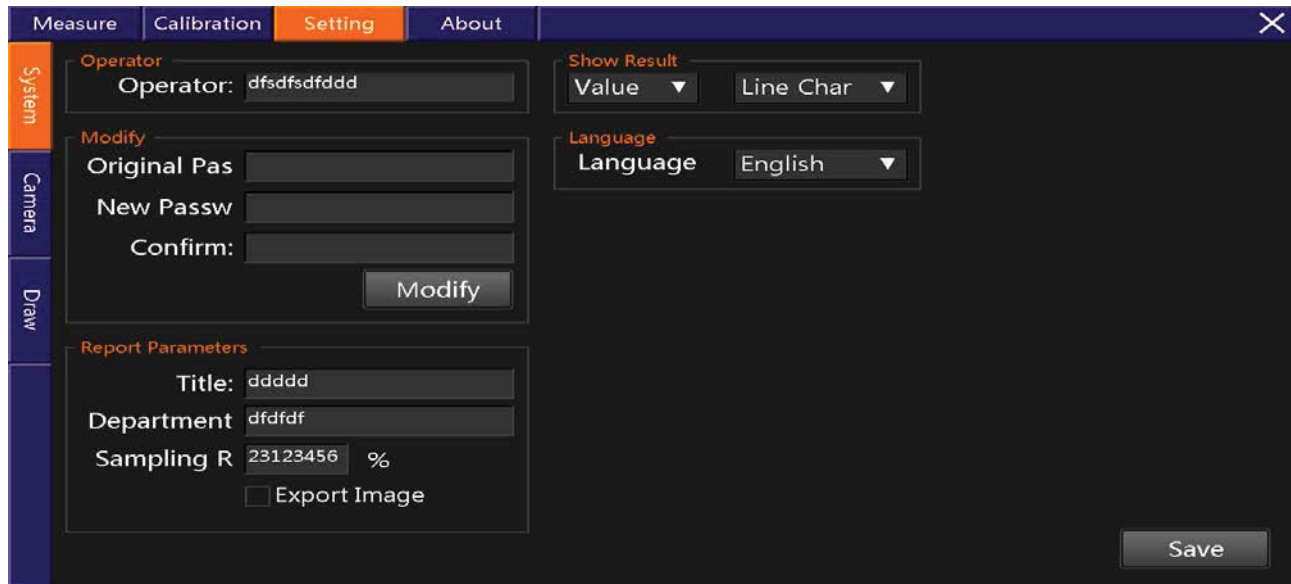● Automatic Calibrate and Manual Motive Calibrate.

4) Operation Menu

This region main measure, UP and Down, Lift and Right could control the measure points, ENT mean confirmation measurement

2.1.3 Setting Page

1. System Setting; 2. Camera Setting 3.Drewing Setting

1) System Setting

- Operator Name Setting: Using operator name is ok.
- Passport Setting: some important authority need set passport.
- Report Parameters Setting: setting some data you want to output.
- Show Result: Bar graphic and curve graphic.
- Language: Chinese and English.

2) Camera Setting

Contain Settings : Camera Type; Virtual Camera; Real-time information; Light Source
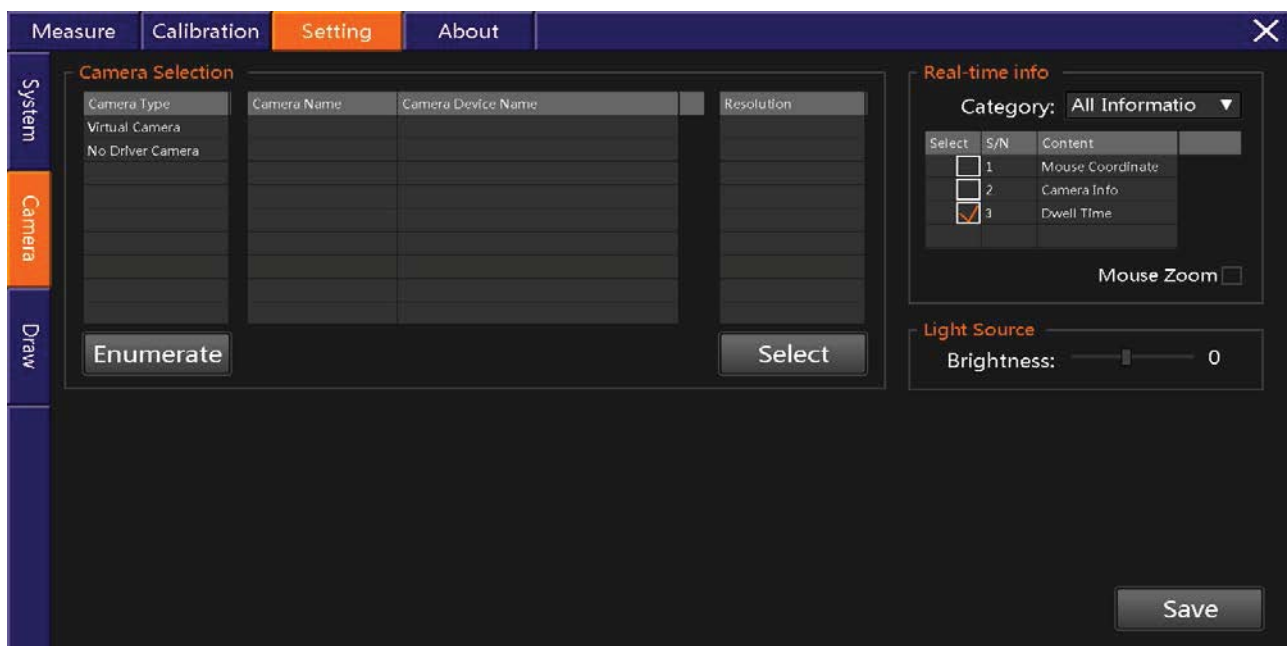
3)   Drew Setting

Include Font Size, Line Width, Line Type as follow:
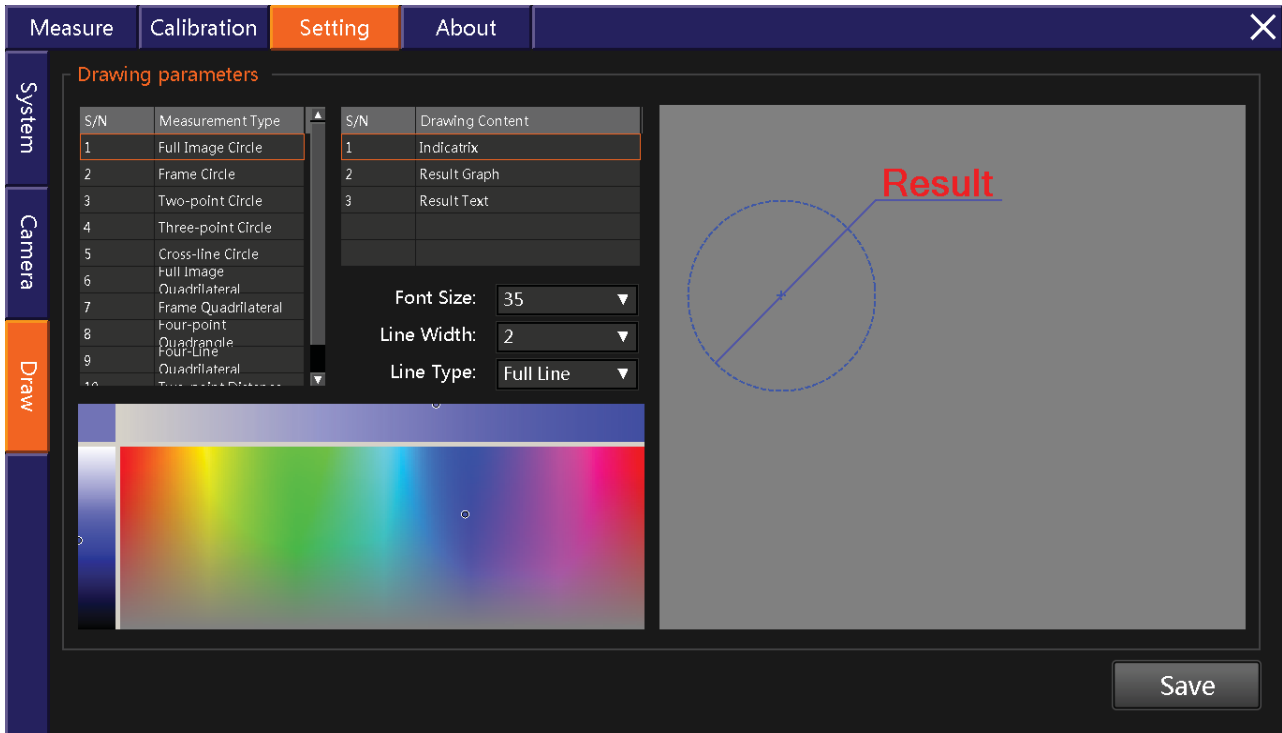
2.1.4 About Page
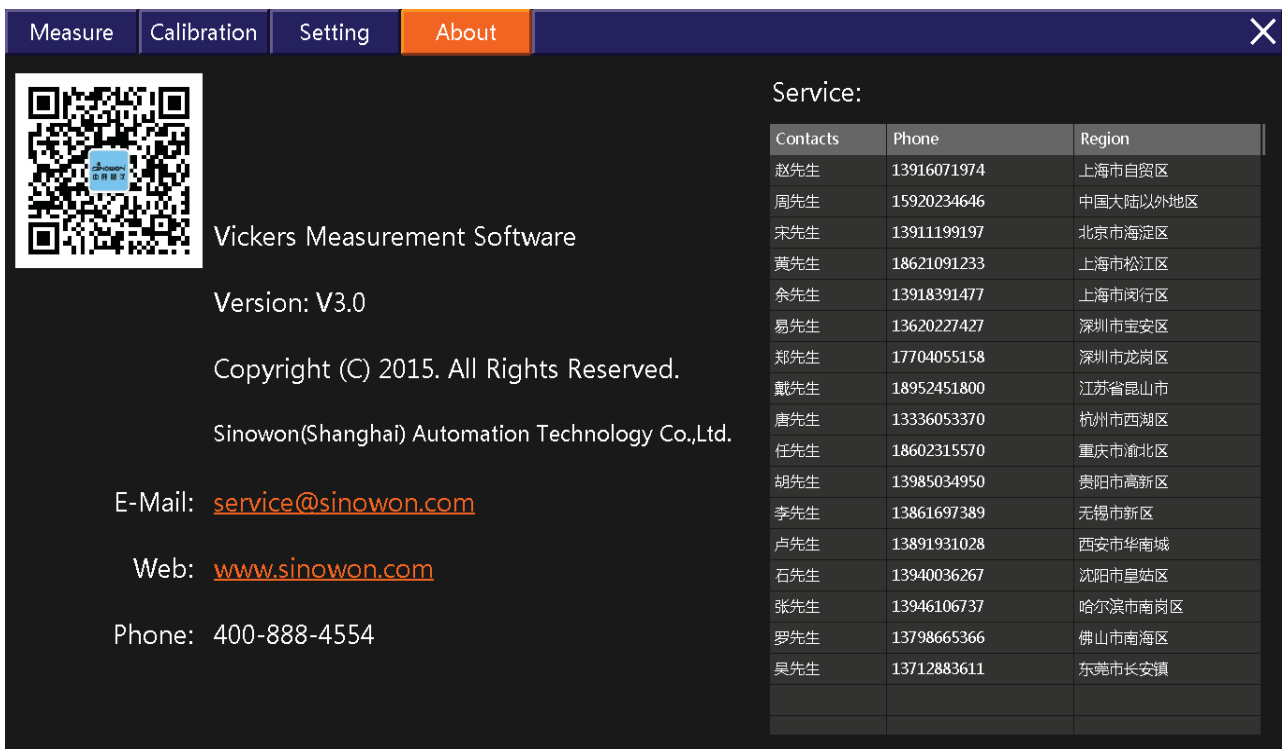
3 Operation Instructions

3.1 Camera Selection

First open the software or need change the camera, Please Click "Camera Selection" .Read picture as follow then click "Enumerate" .
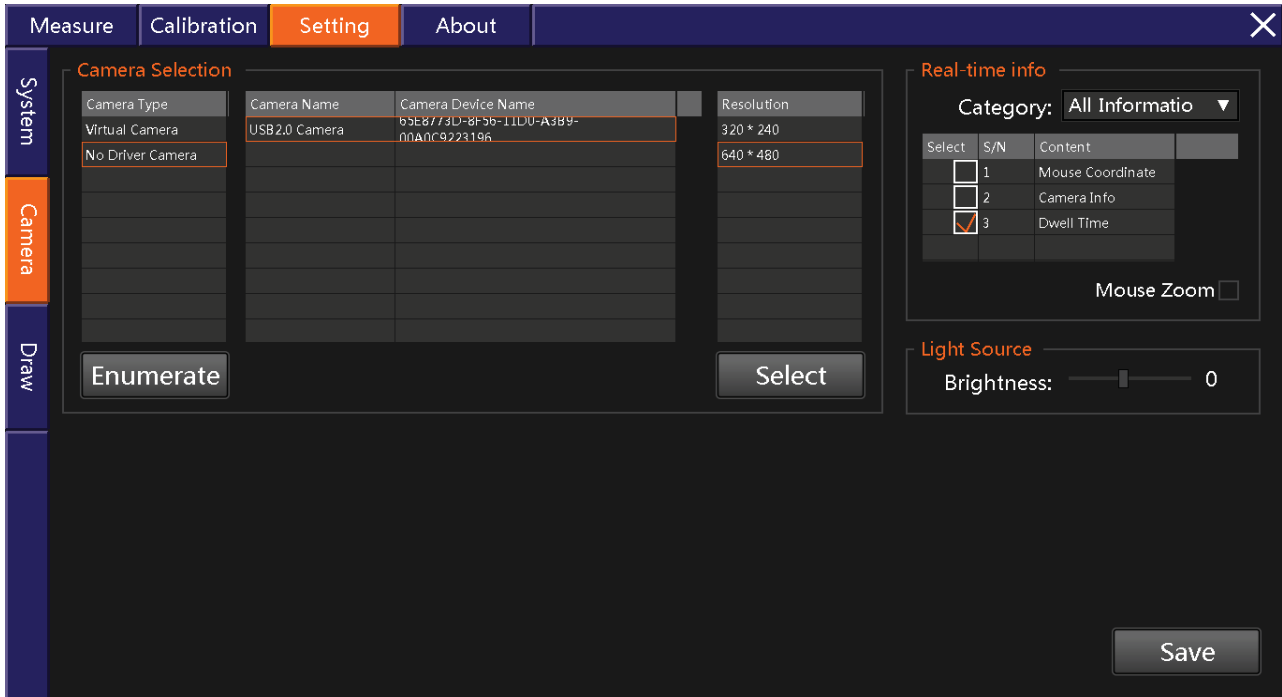
3.2 Camera Calibration

3.2.1 Entry the camera calibration
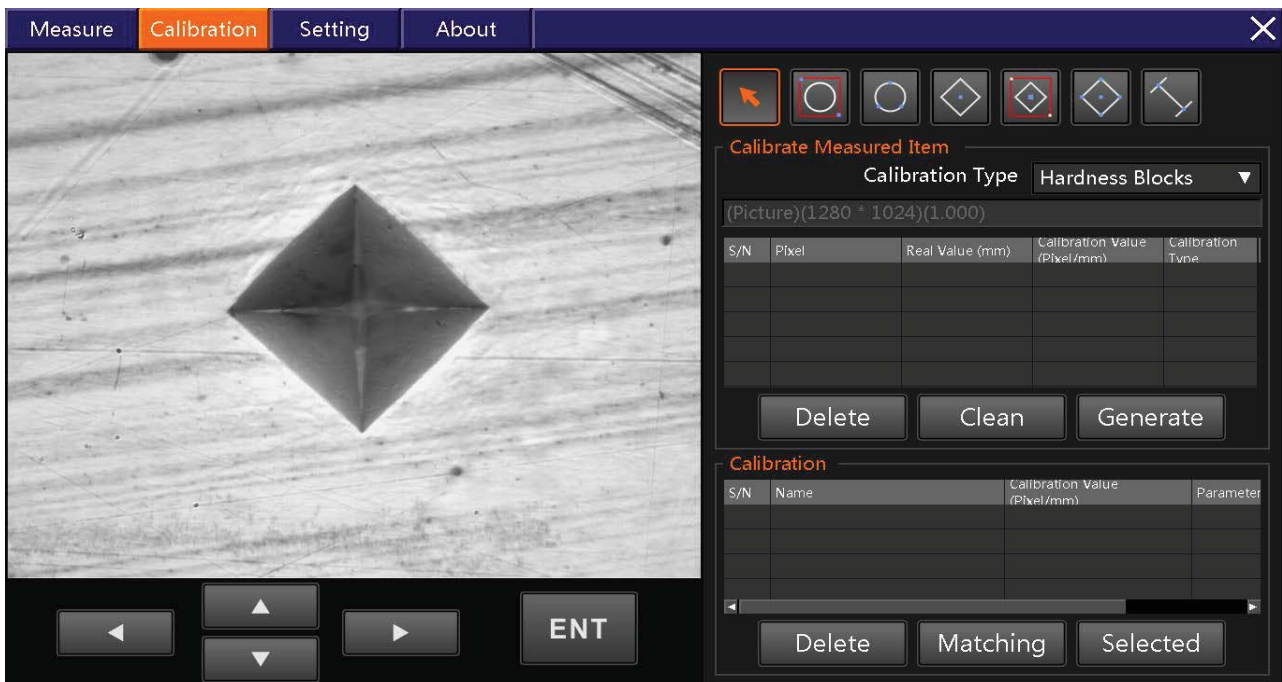
3.2.2 Select Calibration Type
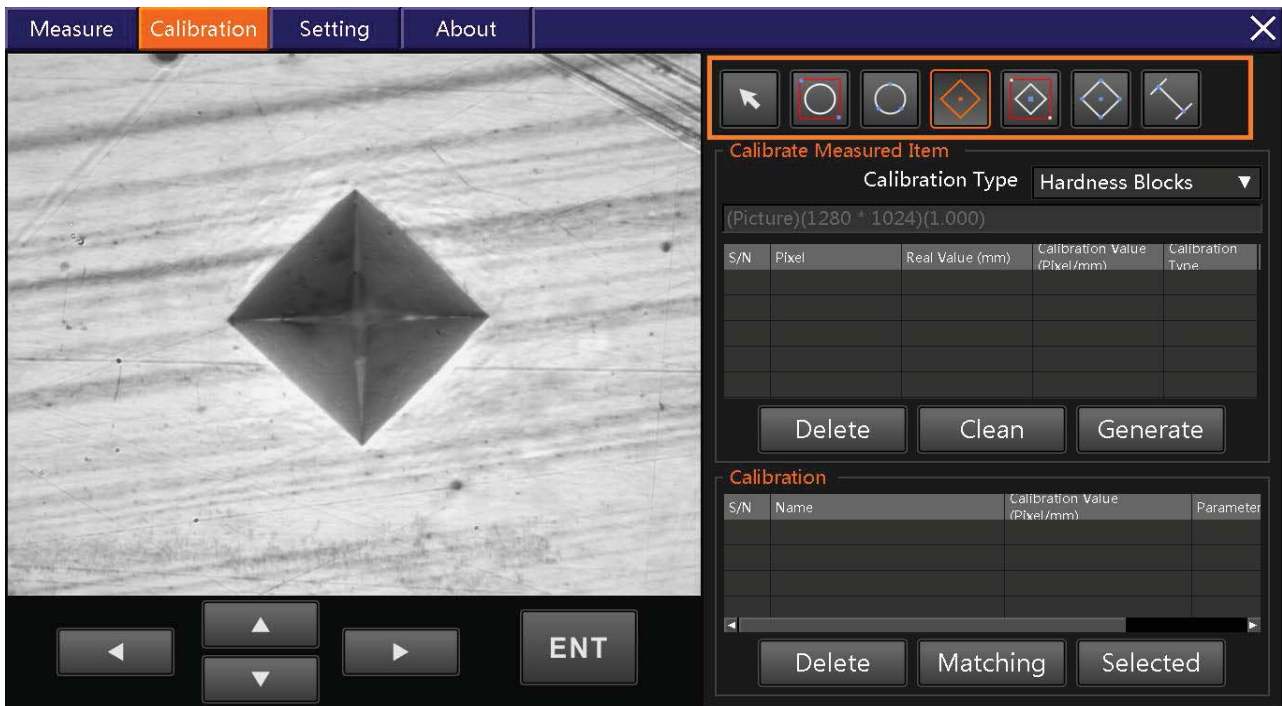
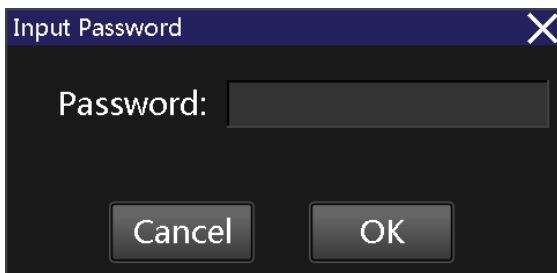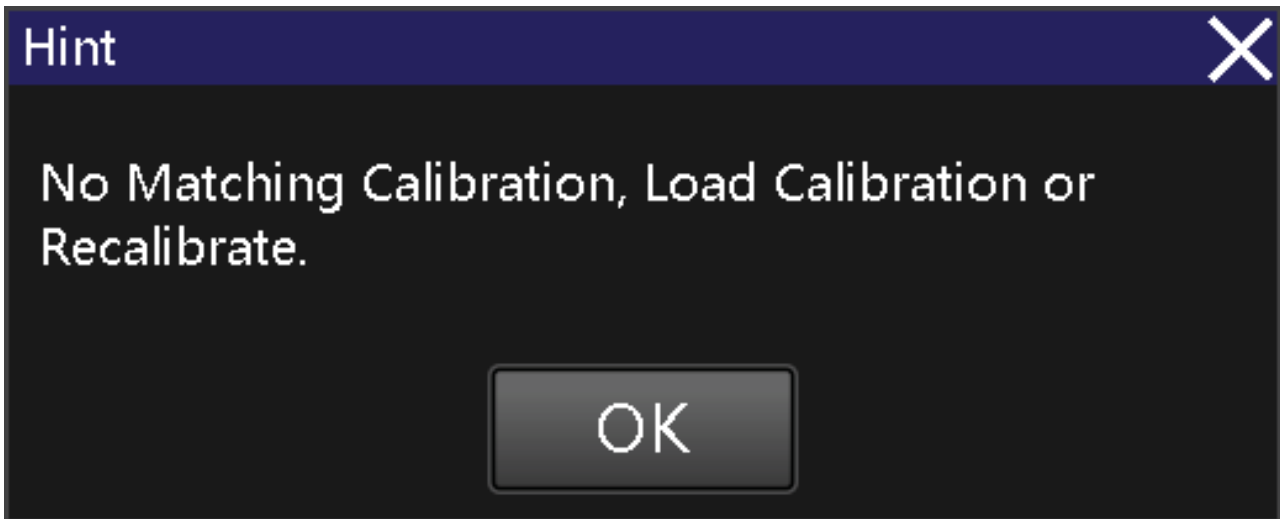## 3.2.3 Calibration

Select Diamond Button, click "ENT" as follow
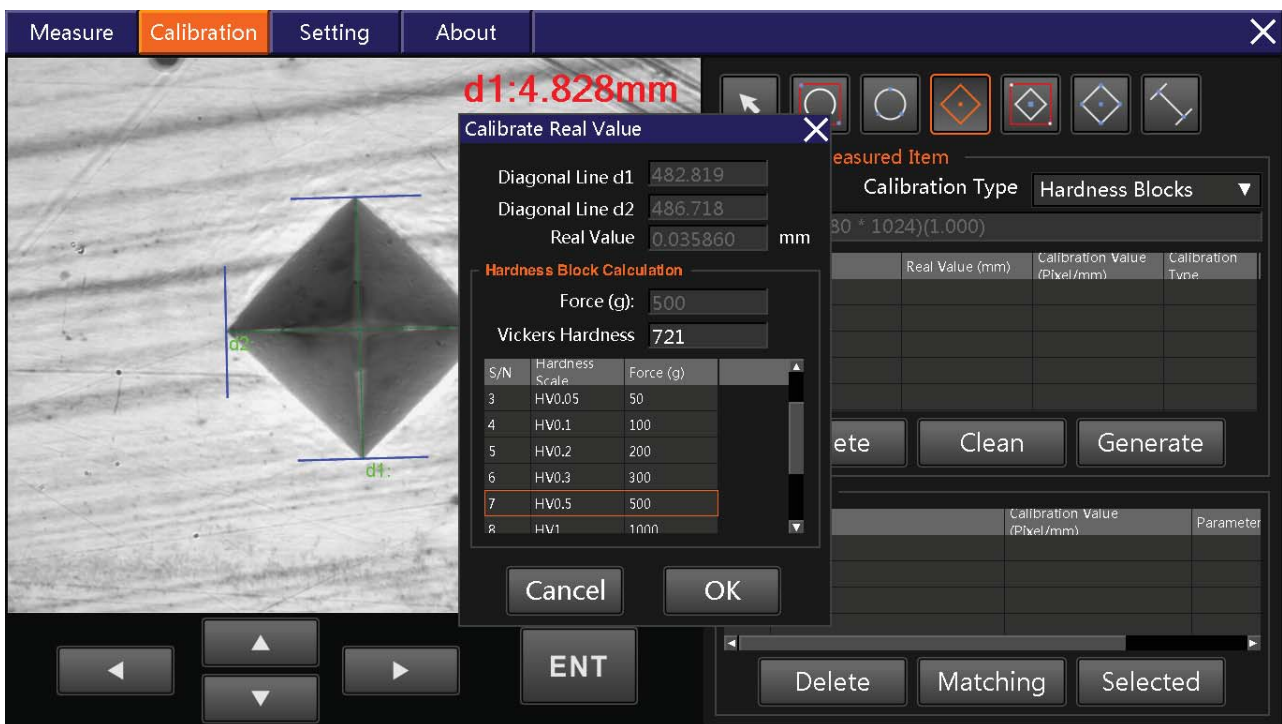
Eg: Vickers Hardness is 721HV, We use force 0.5kg, so we select "7 HV0.5 500" then entry 721, it is a measure calibration record done
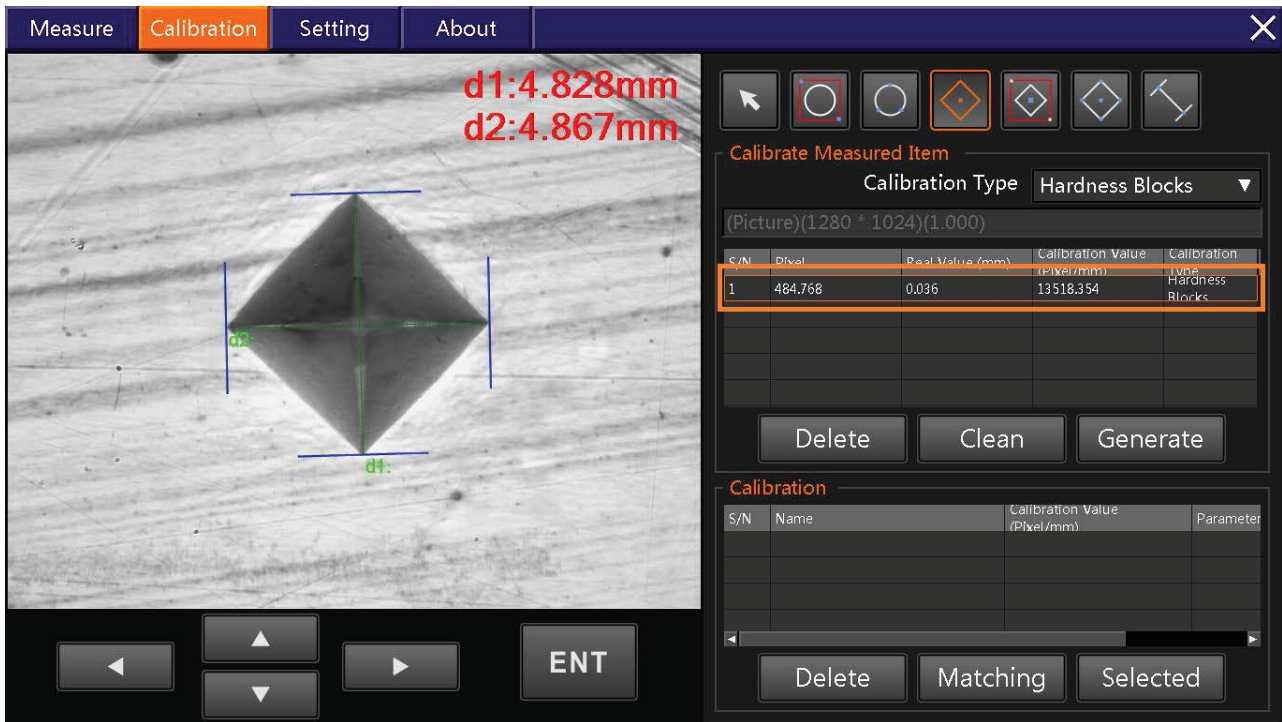
3.2.4 Create Calibration

Default Password: empty; Default Calibration Name: Calibration, as follow
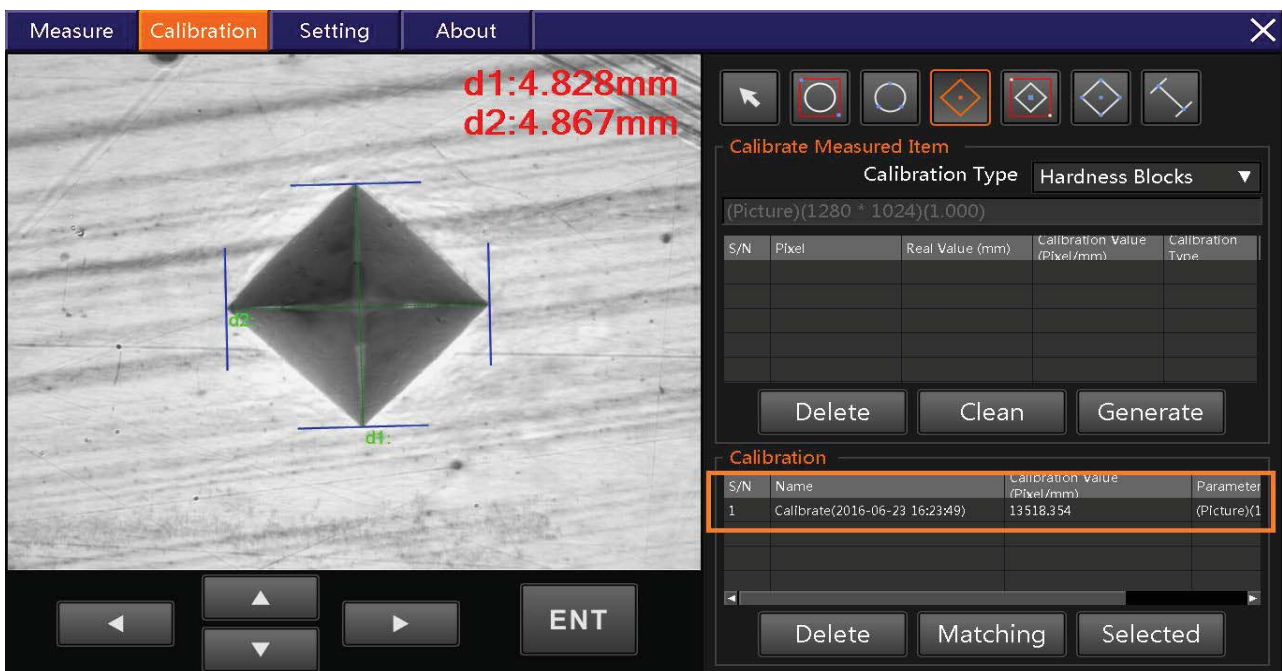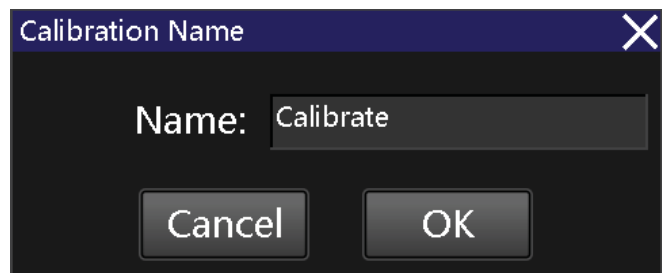
3.3 Measure HV

3.3.1 Entry the measure menu
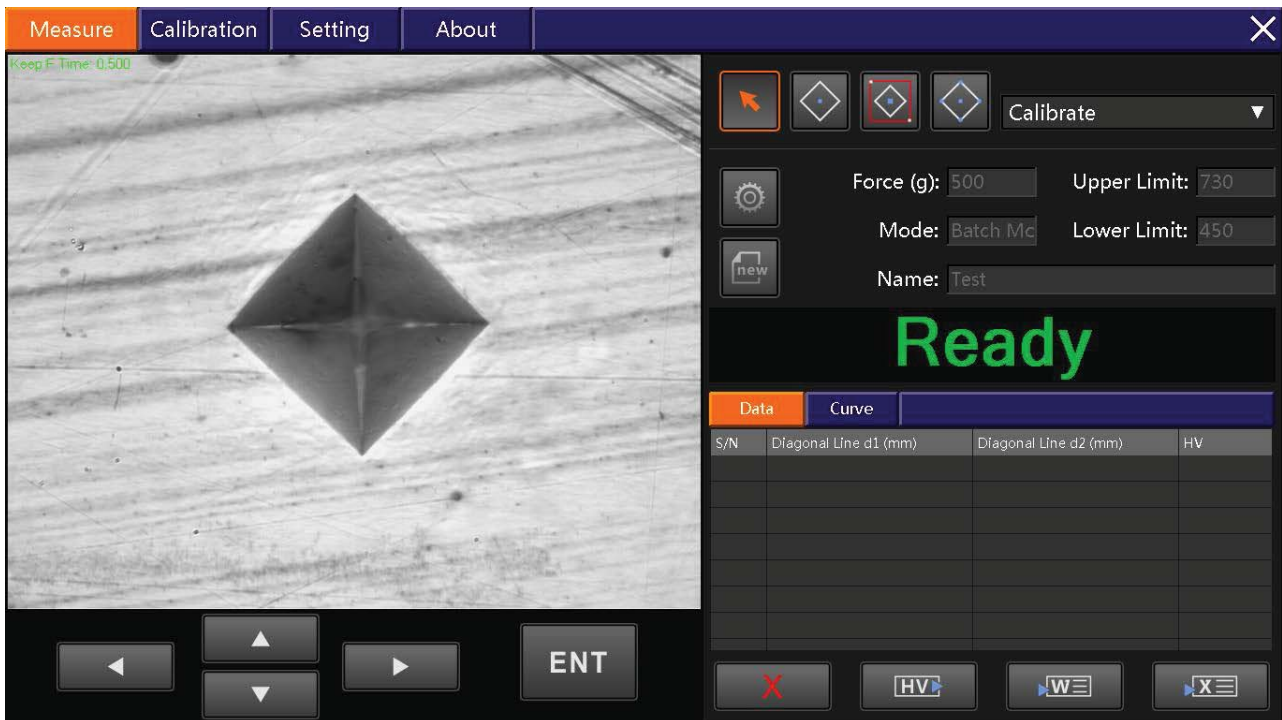
3.3.2 Vickers Measurement Setting

To better measure please select correct impression force:

As follow click the "Parameters"
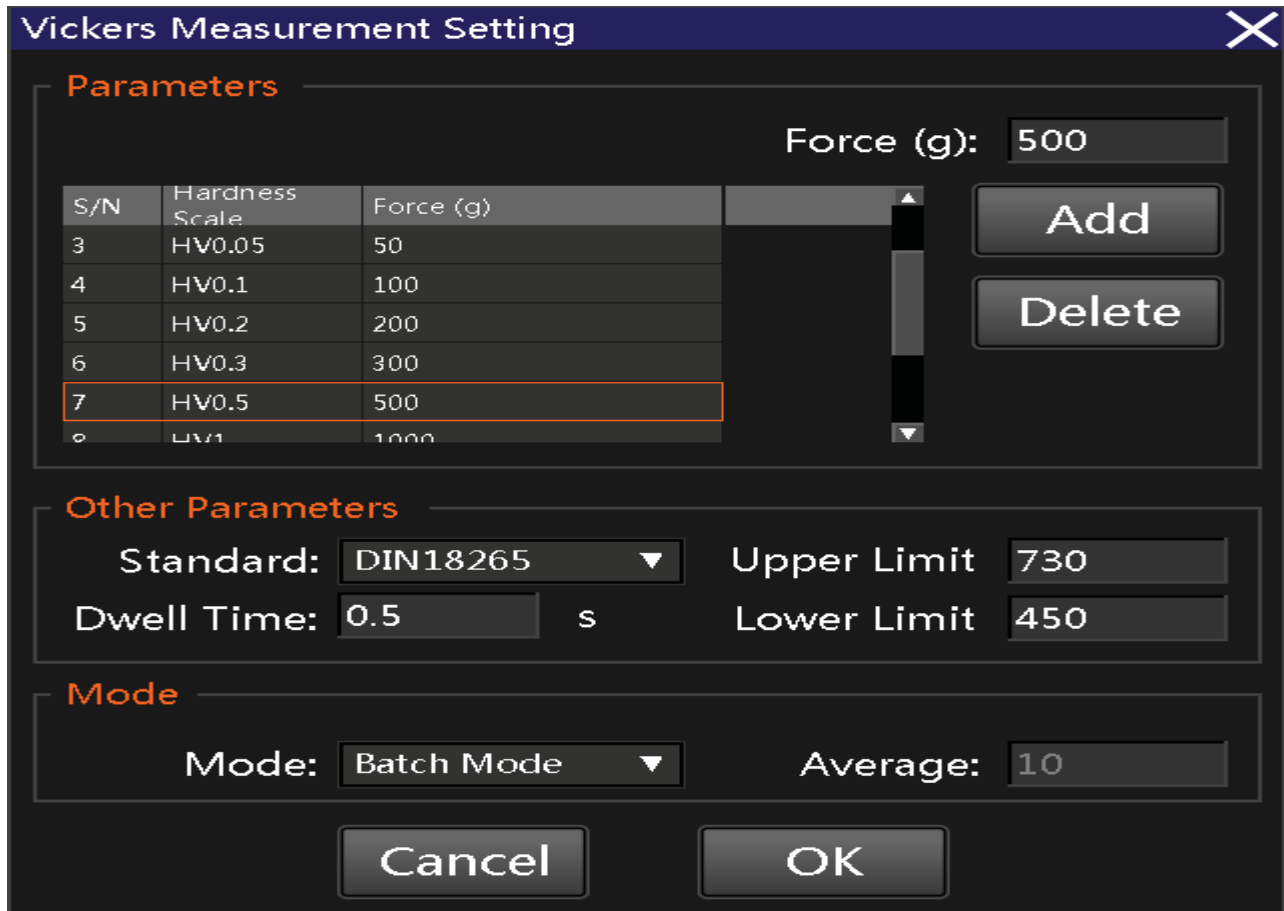
3.3.3 Select Measure Instrument
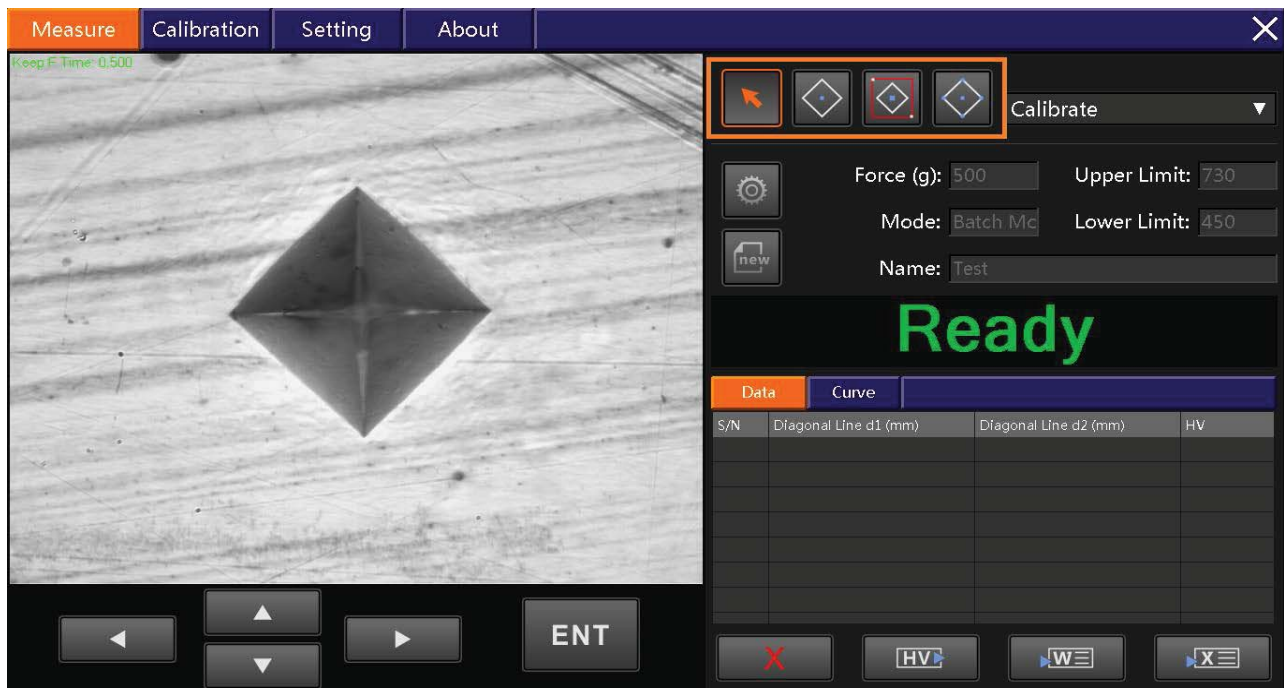
3.3.4 Measurement

During the figure, Click "ENT" the system could auto find impression .

3.3.5 Output Data

SINOWON®

ISO 9001:2015 Certified Company

Sinowon Innovation Metrology Manufacture Limited

Address: A1, KaiSong Park, 2# Baima Xianfeng

Road, South District, DongGuan, China (523080)

Tel: 0086-769-23184144   Fax: 0086-769-22854144

Web: www.sinowon.com   E-mail: sinowon@188.com

Hotline: 0086-137-2828-8444

Authorized Distributors: