

# MBrin-3000A

## Intelligent Fully Automatic Brinell Hardness Tester



Video



## Contact us

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## Features and Applications

### Product Features

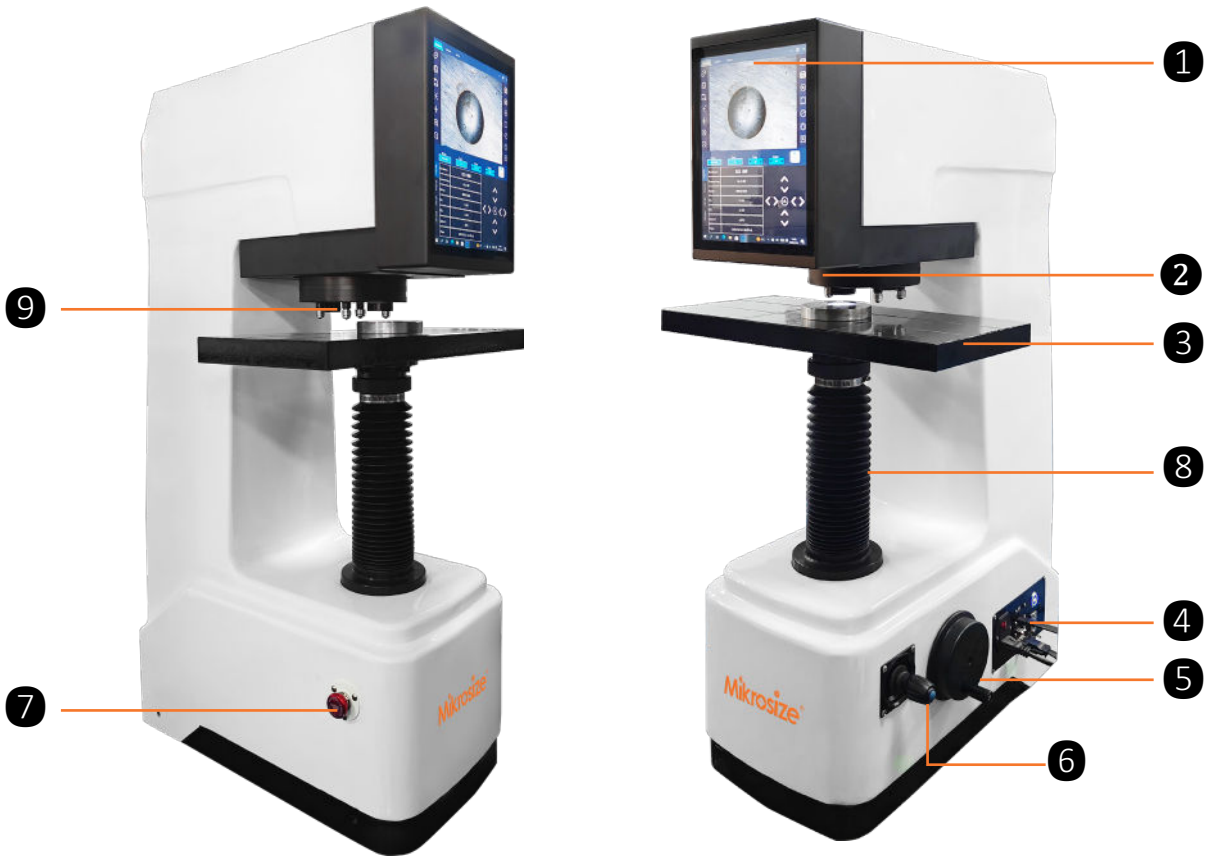
- Closed loop electronic loading ,no need to install dead weights
- 12.1 inches Large touch screen, easy to use, simple to operate
- CMOS directly captures indentation image
- Selectable 12 levels of testing force and 16 brinell hardness test scales.  
4 Brinell indentors installed in turret for automatic brinell testing
- Two objective lens installed in turret for brinell indentation measurement.
- Automatic turret switching according to brinell hardness scale selection.
- The brinell test forces dwelling time can be pre-set and the illumination for indentation measurement can be adjusted;
- Real time display of test force loading time
- Display the measured indentation length, hardness value, measurement frequency, etc;
- The test results can be converted to various hardness scales
- Built in printer for data output.
- With communication interfaces: USB、RS232、WLAN、RJ45LAN



### Product Applications

- In the process of mechanical processing, Brinell hardness tester can be used to detect the hardness of raw materials, in order to select suitable processing technology and cutting tools.
- Can be used to test the hardness of mechanical components such as gears, bearings, bolts, etc., to ensure that they meet design requirements and performance requirements.
- Can be used to test the hardness of forgings to determine the effectiveness of forging processes and the quality of forgings

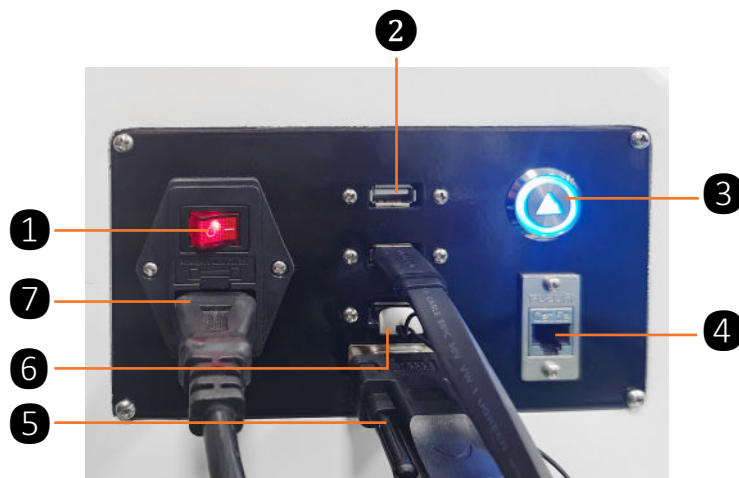
## Instrument Appearance



**1. Colorful Touch Screen**  
**4. Communication Interface**  
**7. Emergency Stop Key**

**2. Auto Turret**  
**5. Handwheel**  
**8. Lifting Rod**

**3. Test Anvil**  
**6. Joystick**  
**9. Indentors & Objective Lens**



**1. Switch**  
**5. RS232 Interface**

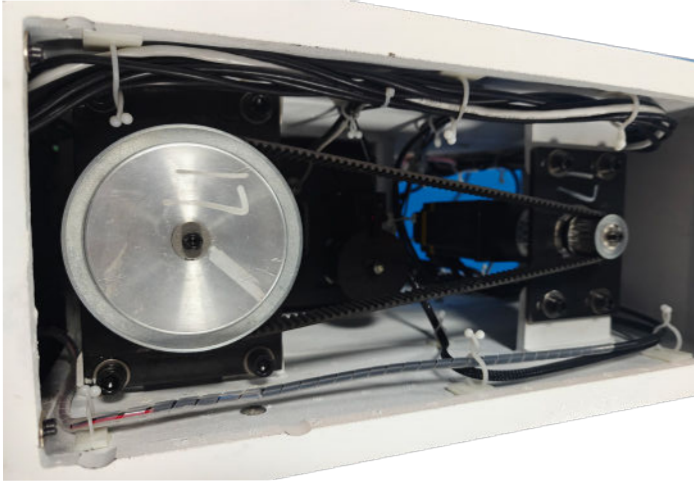
**2. USB Interface**

**3. Start Key**  
**6. Dongle**

**4. RJ45 LAN Interface**  
**7. Power Cord Interface**

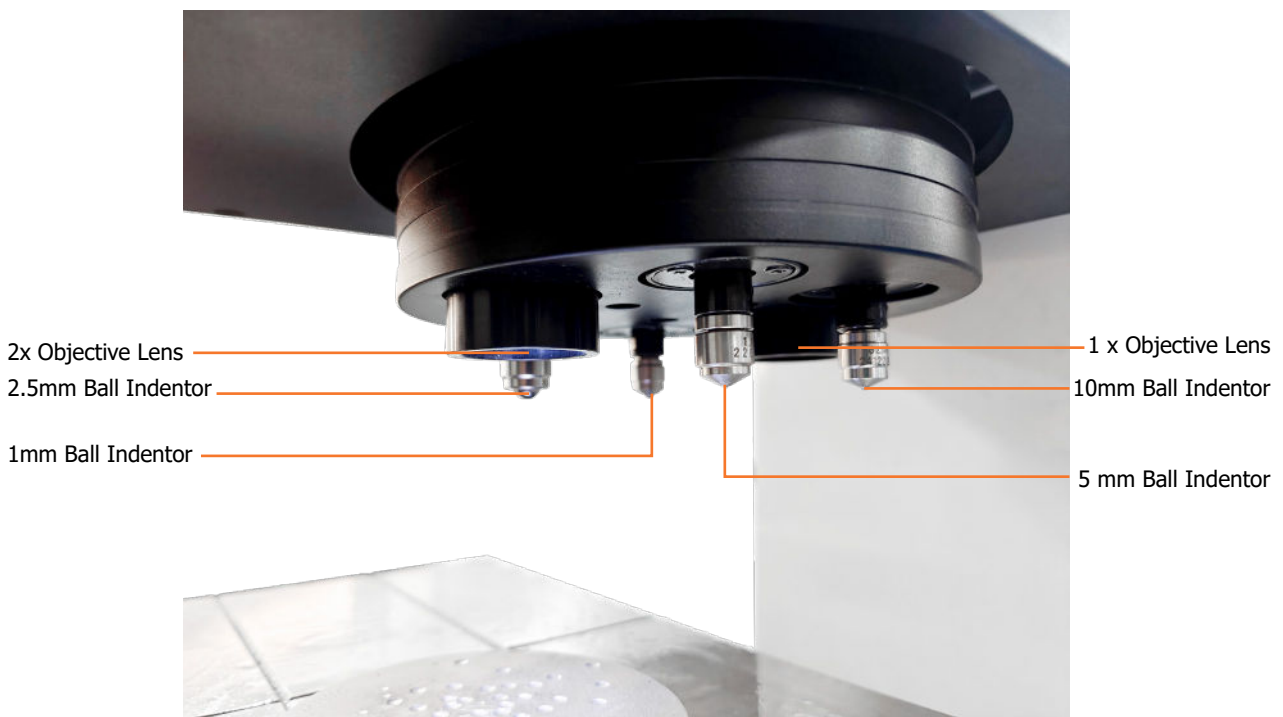
## Interface Display

### Closed Loop System



- This Instrument adopts electronic loading, which can be used after the device is turned on. Combined with high-precision sensors and measurement systems, which ensures the accuracy of measurement results.

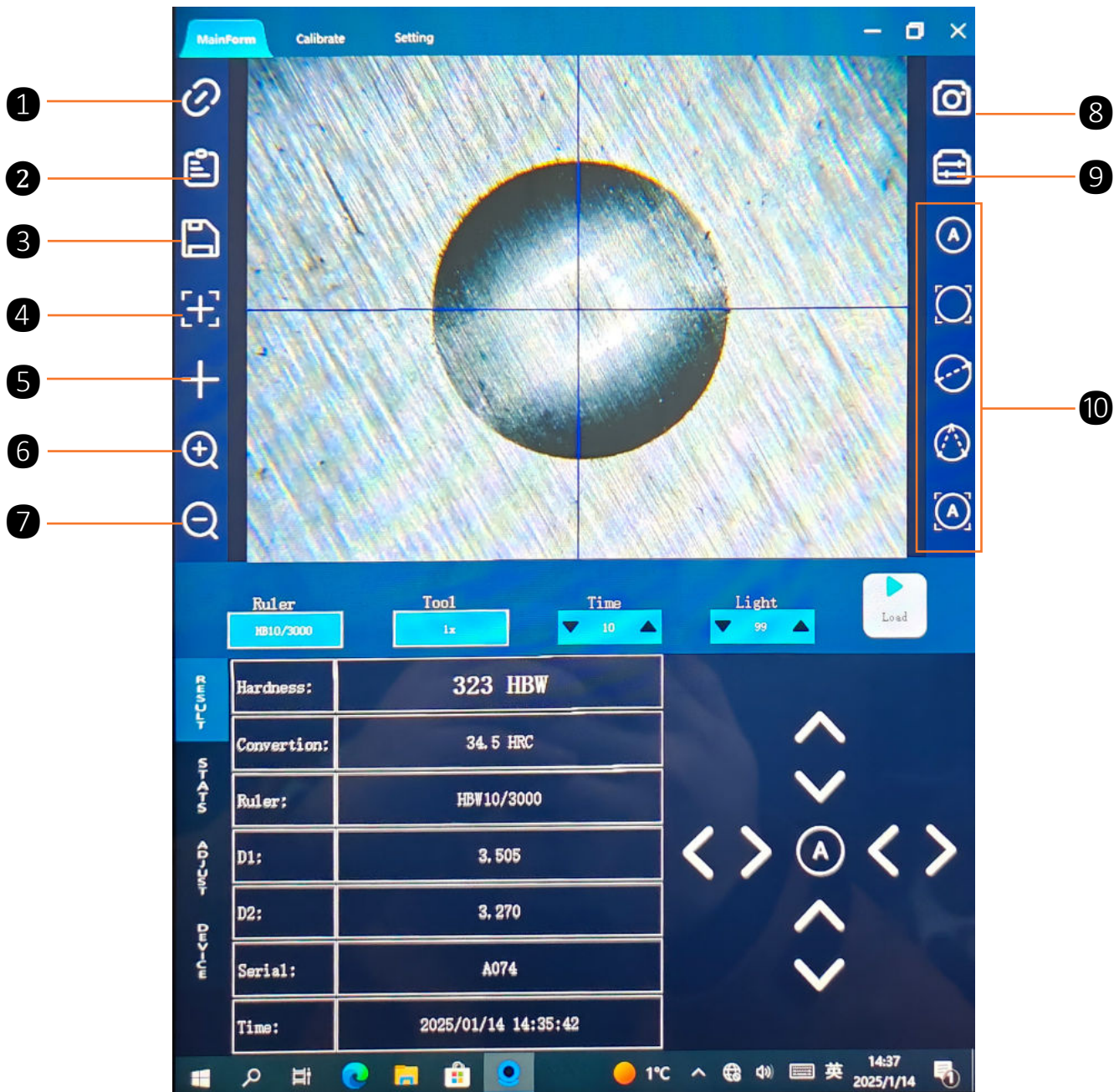
### Indenter & Objective Lens



- The automatic turret of this device is equipped with 4 different brinell indentors and 2 different magnification objective lenses, all of which can directly participate in measurement and observation. According to the user's selected test scale, the indentors and objective lens can be automatically switched

## Interface Display

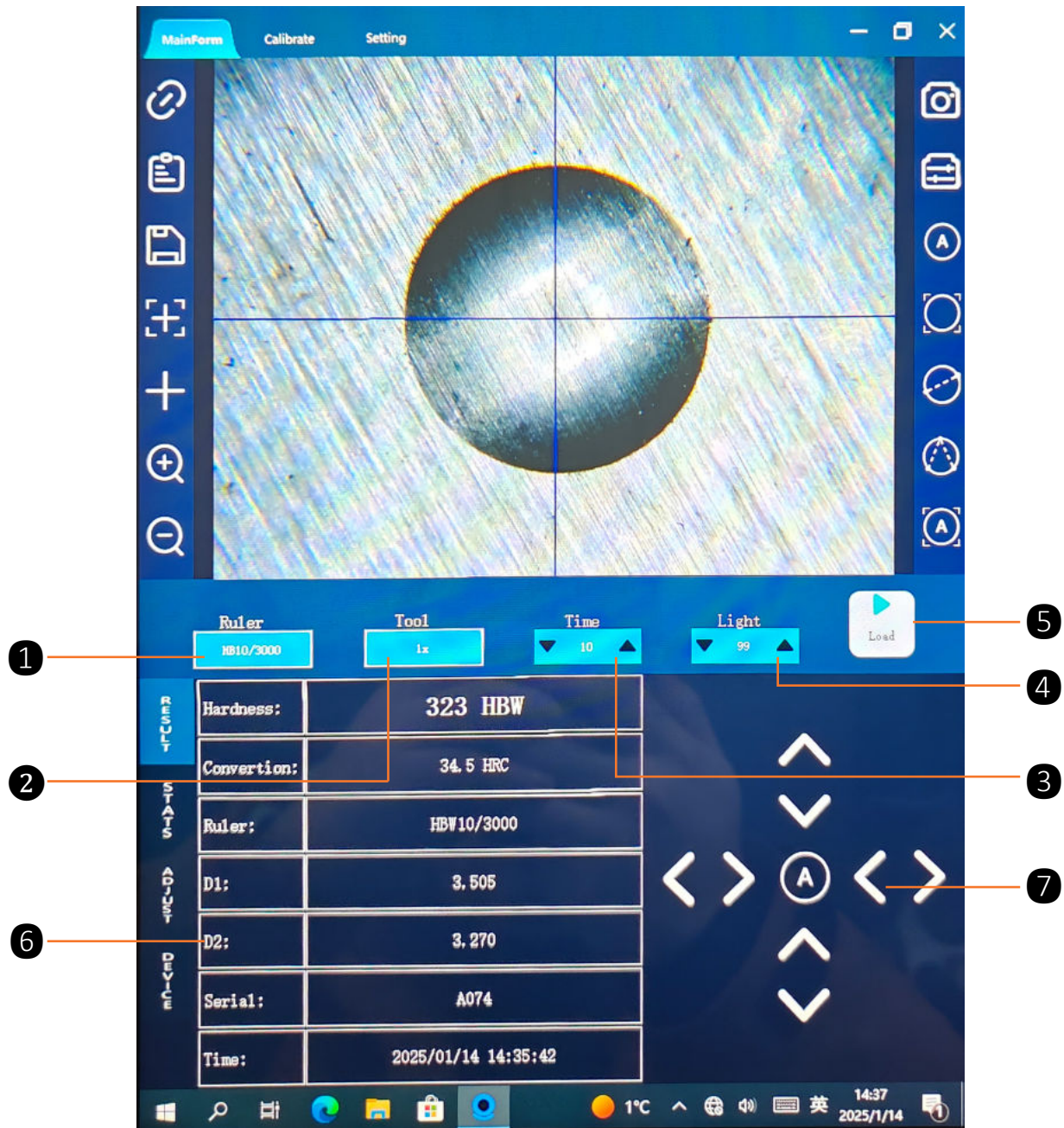
### Main Screen Interface



- |                                      |                                  |                                       |
|--------------------------------------|----------------------------------|---------------------------------------|
| <b>1. Connect to Device</b>          | <b>2. Indentation Image Open</b> | <b>3. Indentation Image Save</b>      |
| <b>4. Cross Line Reset</b>           | <b>5. Cross Line</b>             | <b>6. Brinell Indentation Magnify</b> |
| <b>7. Brinell Indentation Reduce</b> | <b>8. Camera Connect</b>         | <b>9. Camera Setting</b>              |
| <b>10. Measuring</b>                 |                                  |                                       |

## Interface Display

### Main Screen Interface



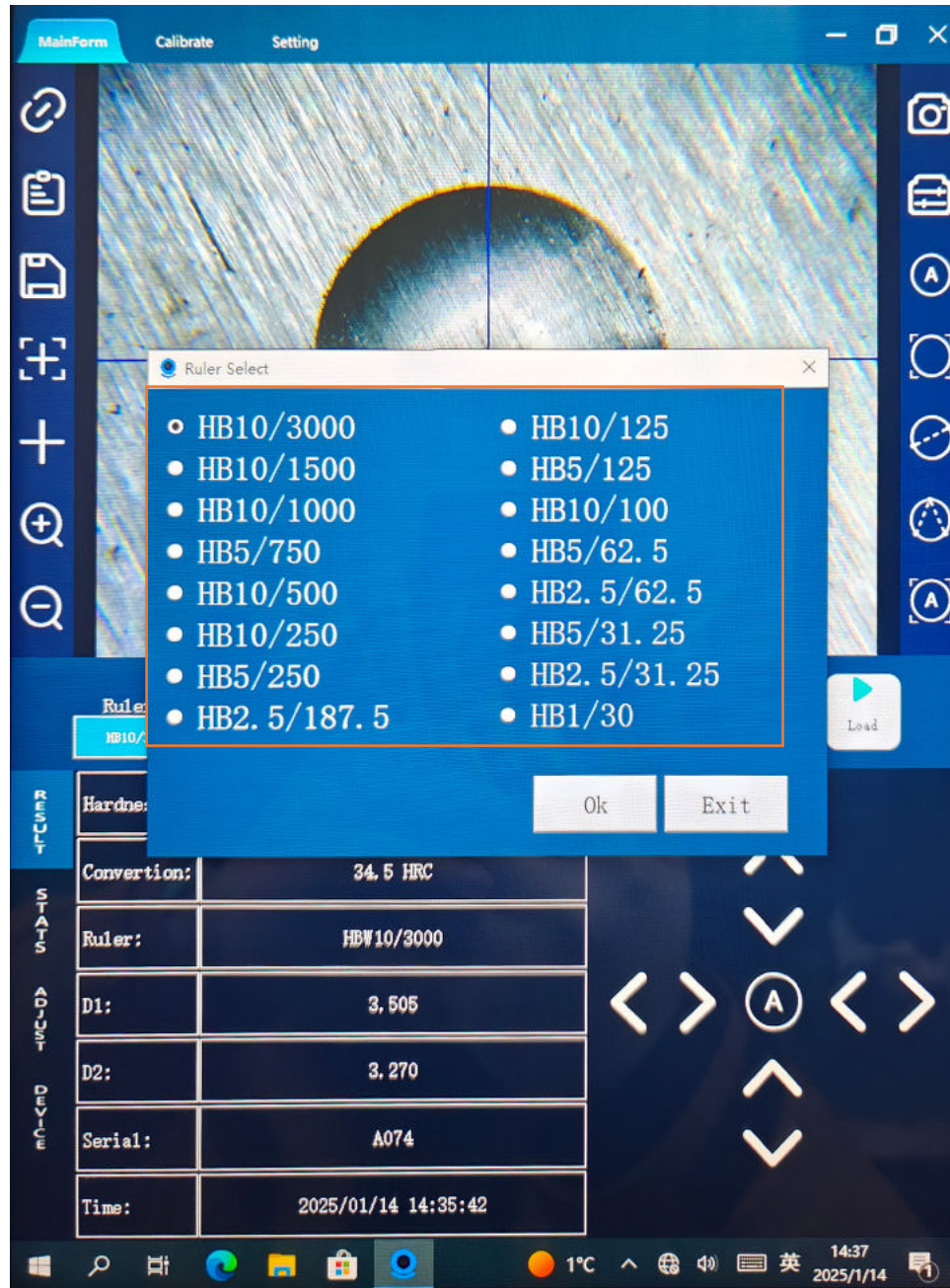
**1.Brinell Hardness Scales**  
**4.Illumination Adjusting**  
**7.Hardness Fine Adjusting**

**2.Turret Switching**  
**5.Loading**

**3.Dwelling Time**  
**6.Test Result**

## Operation Interface

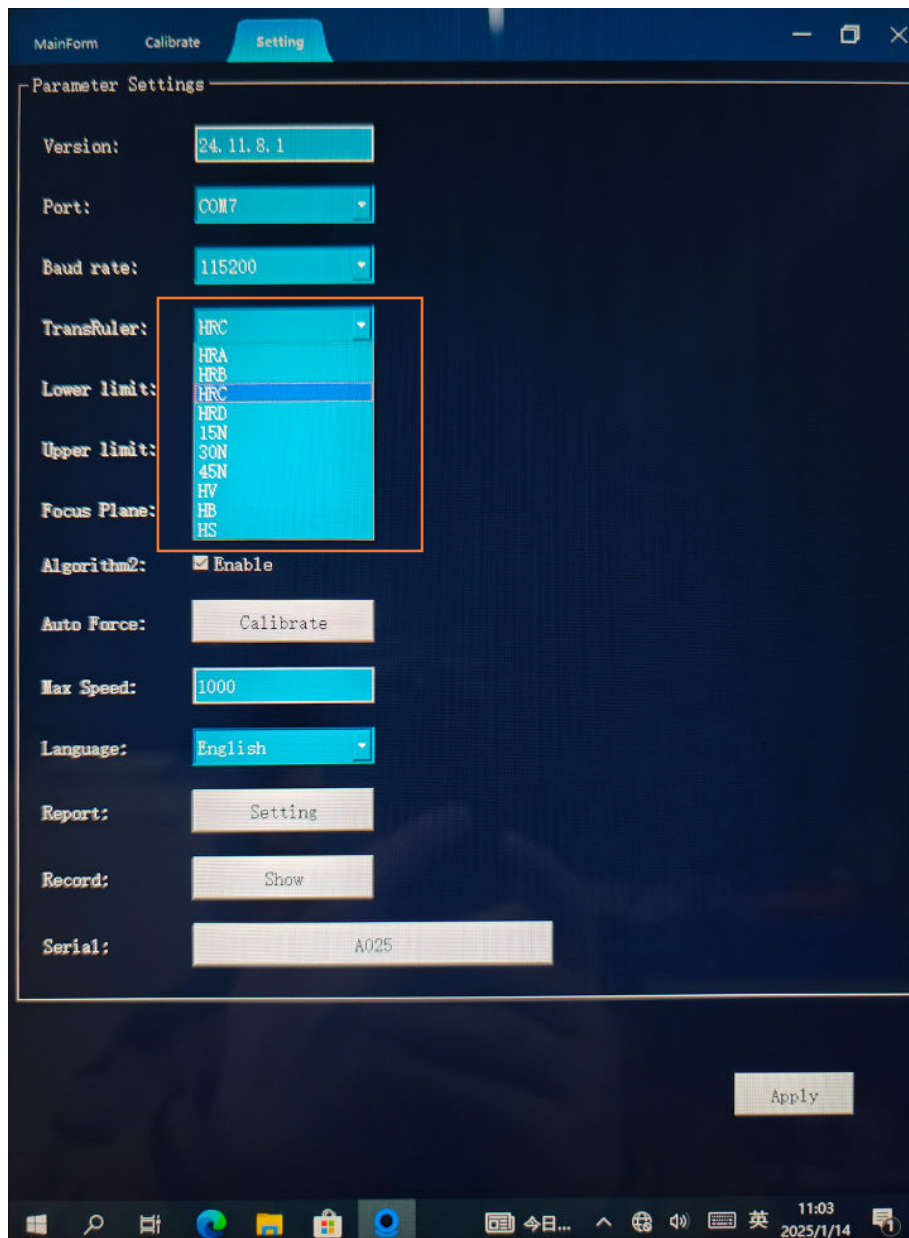
### Brinell Scale Selection



- 4 sizes of indenters with different test forces, a total of 16 testing scales to choose from HBW1/30、HBW2.5/31.25、HBW2.5/62.5、HBW2.5/187.5、HBW5/31.25、HBW5/62.5、HBW5/125、HBW5/250、HBW5/750、HBW10/100、HBW10/125、HBW10/250、HBW10/500、HBW10/1000、HBW10/1500、HBW10/3000

## Operation Interface

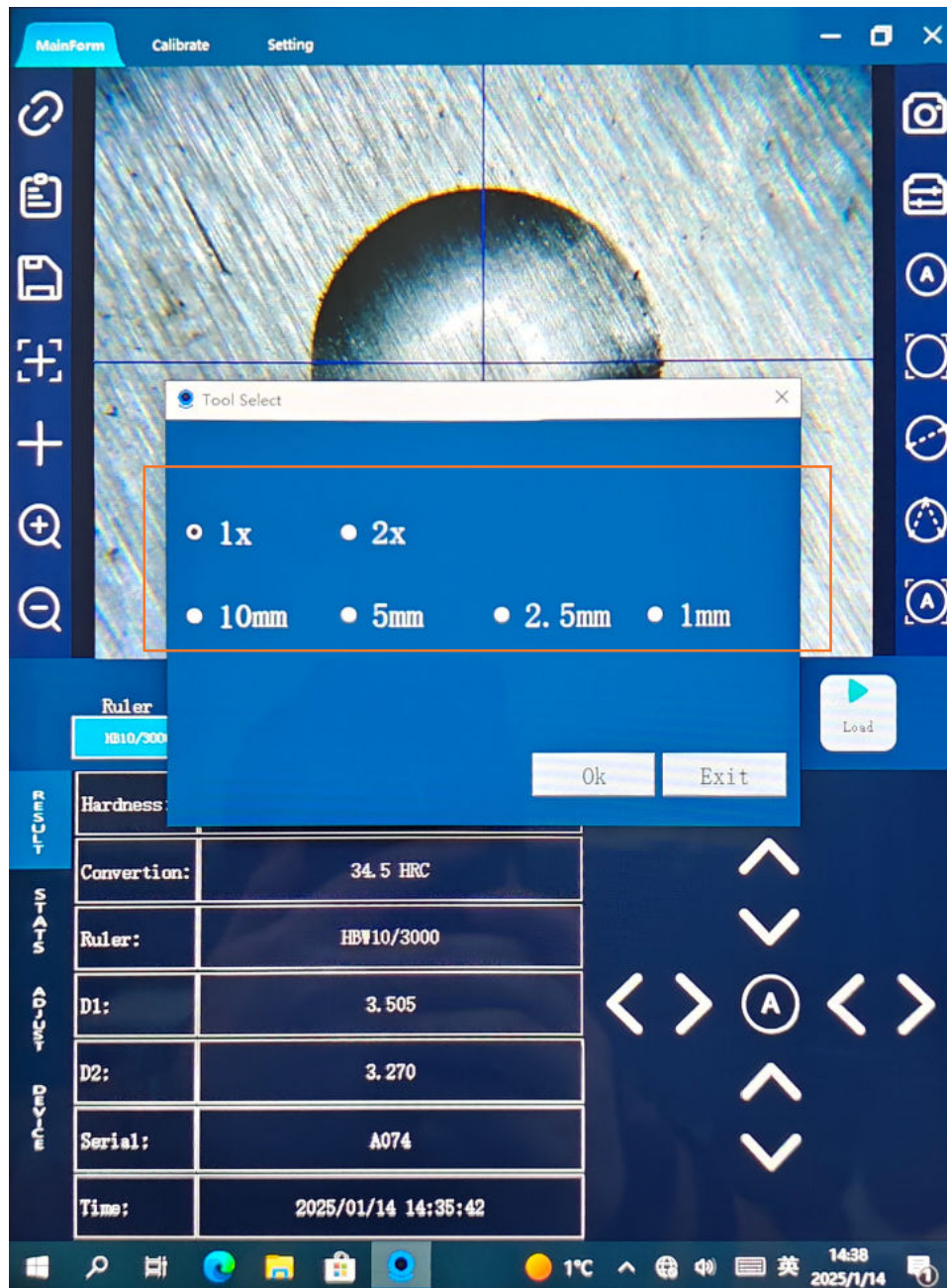
### Conversion Scales



- Can be converted to Rockwell , Vickers scales  
HRA、HRB、HRC、HRD、HS、HV、HB、HR15N、HR30N、HR45N

## Operation Interface

### Turret Selection

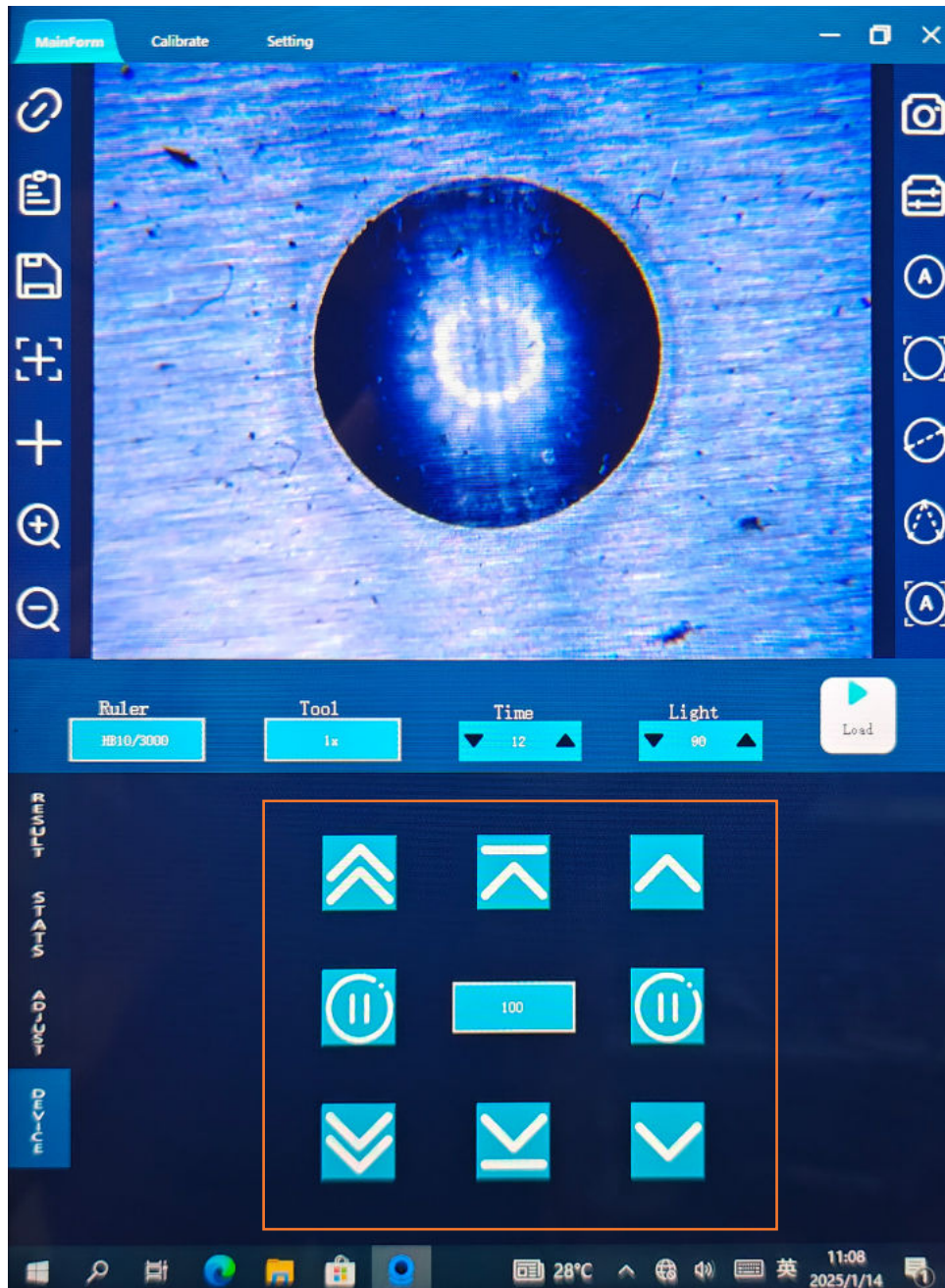


- 4 Indentors & 2 Objective Lens Switching

There are 4 sizes of indenters and 2 types of objective lenses installed on the 6-position automatic turret. Click on the corresponding indenter or objective lens according to different test scales, the turret will automatically rotate to the corresponding position

## Operation Interface

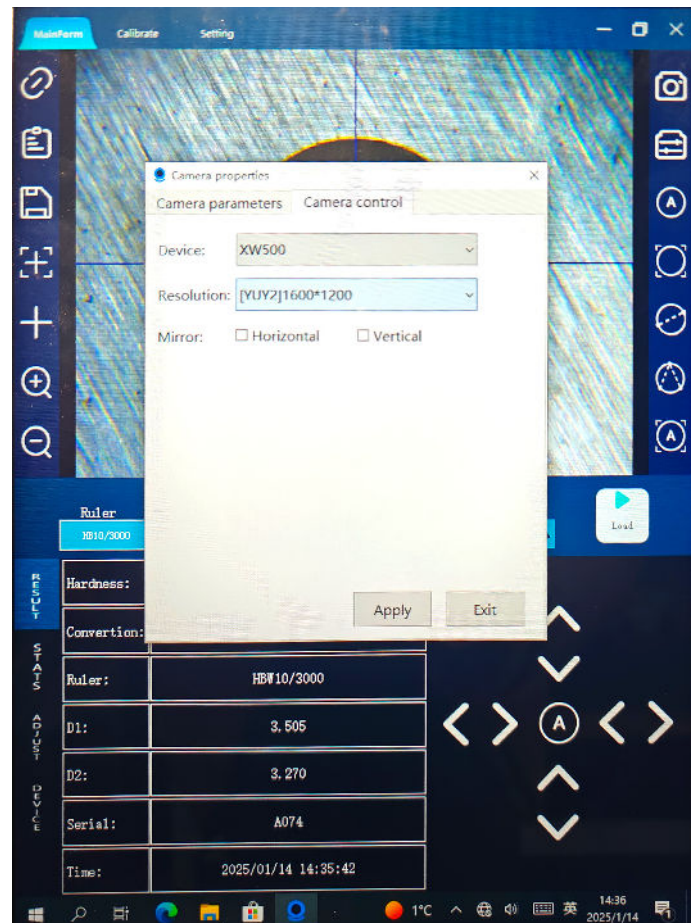
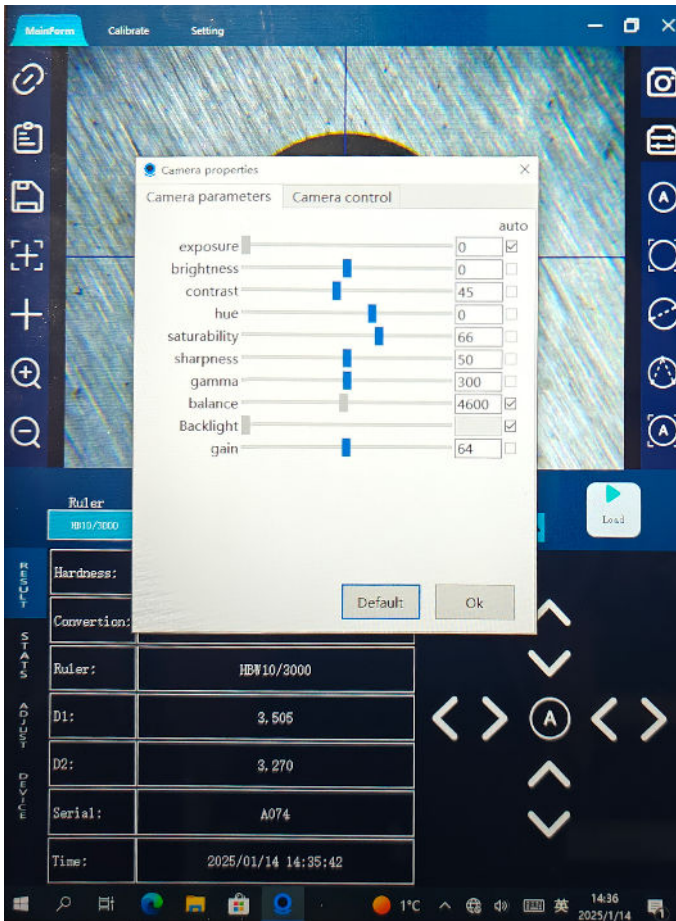
### Lifting Rod Control



- Auto Z-axis movement control  
Control the lifting and stopping of the lifting rod, the lifting speed can be selected.

## Operation Interface

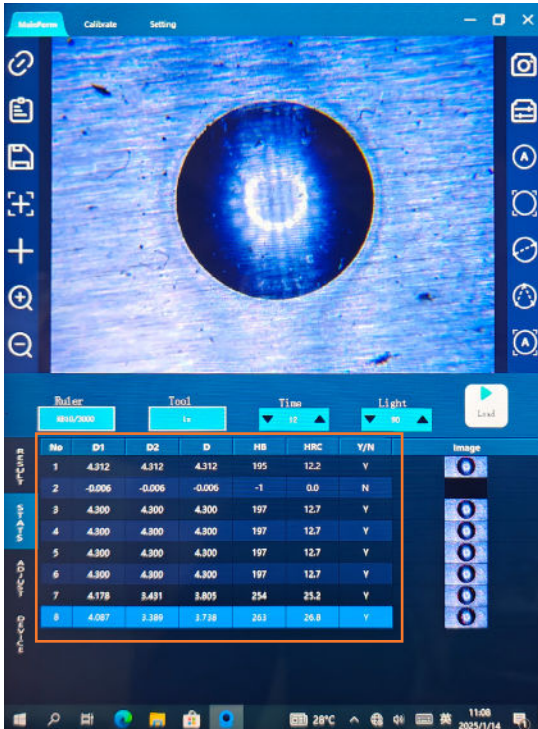
### Camera Setting



- Indention Image Capture Setting  
Users can further improve brinell indention image quality by adjusting detailed parameters such as camera gain and exposure.

## Operation Interface

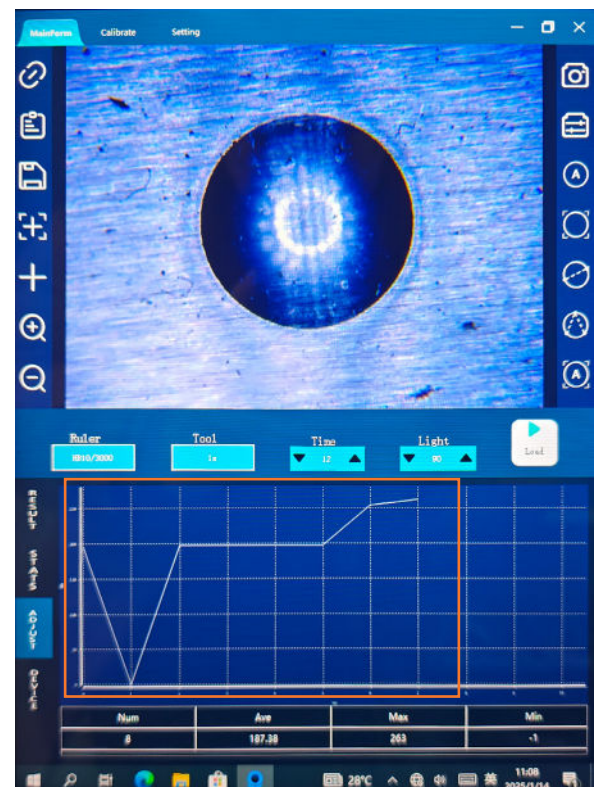
### Data Statistics



- For User 's Viewing  
The machine will record the data information of the completed test, including indentation diameter, hardness value, converted hardness value, and indentation image.

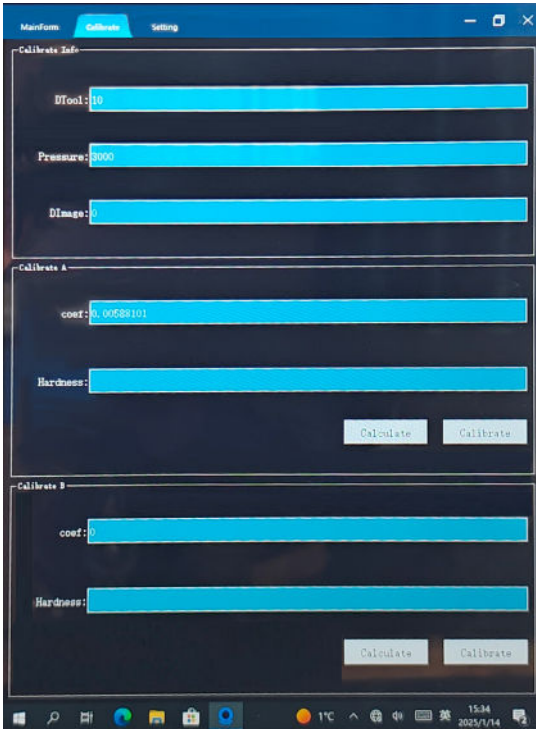
### Curve Graph

- Intuitive viewing test results  
The recorded data will generate a curve graph, making the test results more intuitive and clear



## Operation Interface

### Calibration



- Calibrate by standard hardness blocks  
When using a standard hardness block for calibration, it should be noted that the currently used objective lens must be calibrated, otherwise the calibration will be invalid.

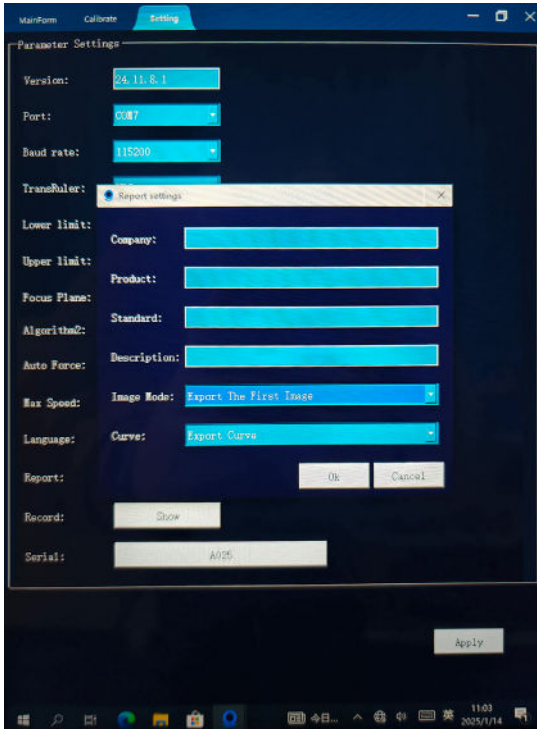
### Setting

- Instrument Setting
  - Serial Port Selection
  - Conversion Scale Selection
  - UP and Low Limit
  - Lifting Rod Speed
  - Language



## Operation Interface

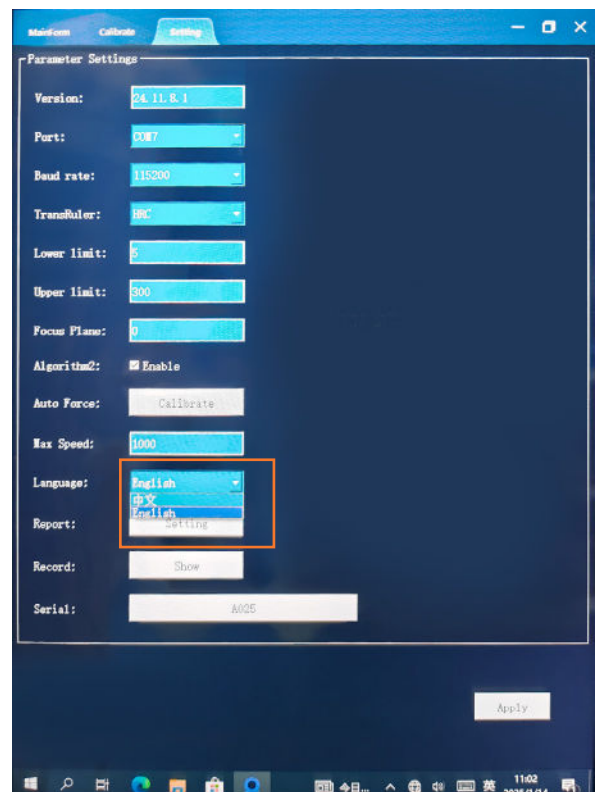
### Report Setting



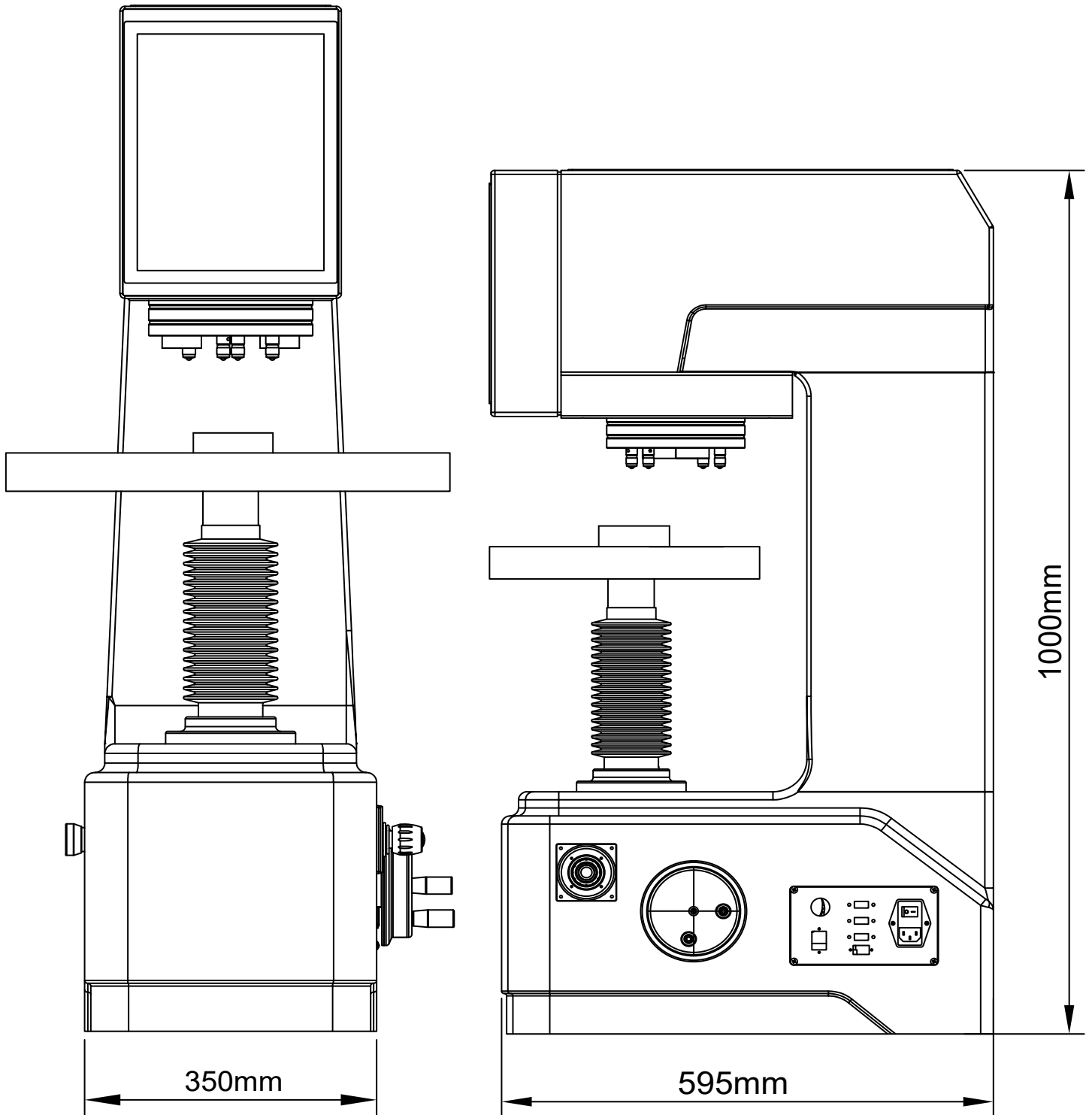
- Select the content of the output report, which can include indentation images and data statistical curve graphs.

### Language Choice

- Support English or Other Customized Languages.



## Instrument Dimension









# Technical Specification

<b>Name</b>	Intelligent Fully Automatic Brinell Hardness Tester (4 Indentors+2 Objective Lens)
<b>Model</b>	MBrin-3000A
<b>Test Force</b>	30kg、31.25kg、62.5kg、100kg、125kg、187.5kg、 250kg、500kg、750kg、1000kg、1500kg、3000kg  294.2N、306.45N、612.9N、980.7N、1226N、1839N、 2452N、4903N、7355N、9807N、14710N、29420N
<b>Hardness Scales</b>	HBW1/30、HBW2.5/31.25、HBW2.5/62.5、HBW2.5/187.5、 HBW5/31.25、HBW5/62.5、HBW5/125、HBW5/250、 HBW5/750、HBW10/100、HBW10/125、HBW10/250、 HBW10/500、HBW10/1000、HBW10/1500、HBW10/3000
<b>Conversion Scales</b>	HRA、HRB、HRC、HRD、HS、HV、HB、HR15N、HR30N、 HR45N
<b>Loading Method</b>	8~650HBW
<b>Test Height</b>	Auto Loading/Dwelling/Unloading
<b>Test Throat</b>	280mm
<b>Main Test Force Loading Time</b>	200mm
<b>Test Height (mm)</b>	5~8s
<b>Dwelling Time</b>	0~99s



# Technical Specification

<b>Turret</b>	Automatic
<b>Objective Magnification</b>	1X、 2X
<b>Camera Magnification</b>	20X
<b>Total Magnification</b>	20X、 40X
<b>Indenter Diameter (mm)</b>	Φ1、 Φ2.5、 Φ5、 Φ10
<b>Indention Measuring Repeatability</b>	±0.8%
<b>Data Display</b>	12.1-inch Industrial Grade Touch Screen
<b>Data Output</b>	Word , Excel or Printer
<b>Illumination</b>	LED
<b>Communication Interface</b>	USB、 RJ45LAN、 WLAN、 RS232
<b>Dimensions (LxWxH) mm</b>	1000*595*350
<b>Power Supply</b>	AC220V/110V±5%, 50~60Hz
<b>Net Weight</b>	210kg



## Standard Delivery

Name	Qty	Photo
<b>Machine Mainframe</b>	1 pc	
<b>Φ1mm Brinell Indentor</b>	1 pc	
<b>Φ2.5mm Brinell Indentor</b>	1 pc	
<b>Φ5mm Brinell Indentor</b>	1 pc	
<b>Φ10mm Brinell Indentor</b>	1 pc	
<b>Φ1mm、Φ2.5mm、Φ5mm、Φ10mm Hard Alloy Ball</b>	4 pcs	

## Standard Delivery

Name	Qty	Photo
<b>480*230mm Test Anvil</b>	1 pc	
<b>Φ110mm Test Anvil</b>	1 pc	
<b>90*110mm V-shape Test Anvil</b>	1 pc	
<b>Hardness Block (150~250) HBW10/3000</b>	1 pc	
<b>Hardness Block (80~110) HBW10/1000</b>	1 pc	
<b>USB Software</b>	1 pc	/

## Standard Delivery

Name	Qty	Photo
Dongle	1 pc	/
Anti-dust Cover	1 pc	/
Allen Wrench	1 pc	/
Power Cord	1 pc	/
Fuse	2 pcs	/
Instruction Manual	1 copy	
Product Certificate	1 copy	
Warranty Card	1 copy	