

MBrin-3000A

Intelligent Fully Automatic Brinell Hardness Tester



Video



Contact us

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Features and Applications

Product Features

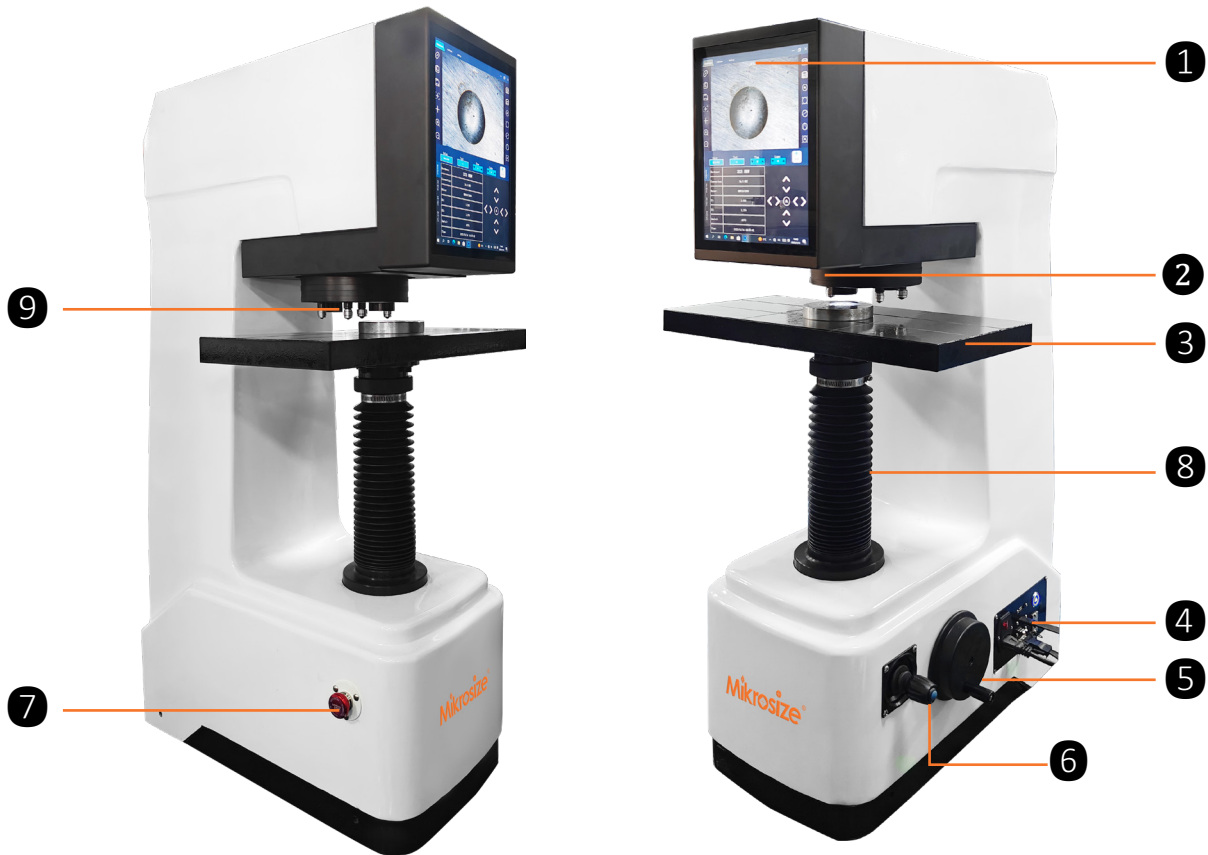
- Closed loop electronic loading ,no need to install dead weights
- 12.1 inches Large touch screen, easy to use, simple to operate
- CMOS directly captures indentation image
- Selectable 12 levels of testing force and 16 brinell hardness test scales.
4 Brinell indentors installed in turret for automatic 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

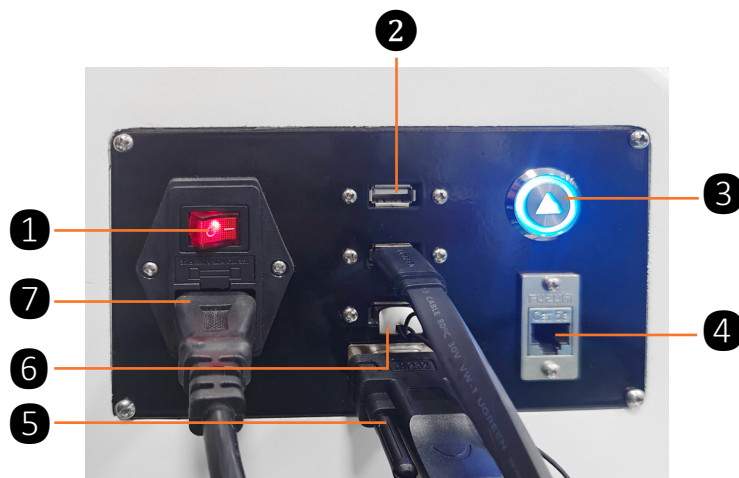
Instrument Appearance



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

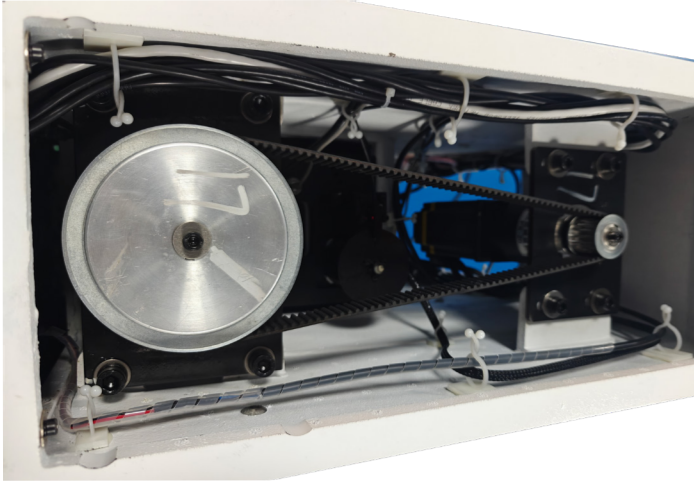
2. USB Interface

3. Start Key
6. Dongle

4. RJ45LAN Interface
7. Power Cord Interface

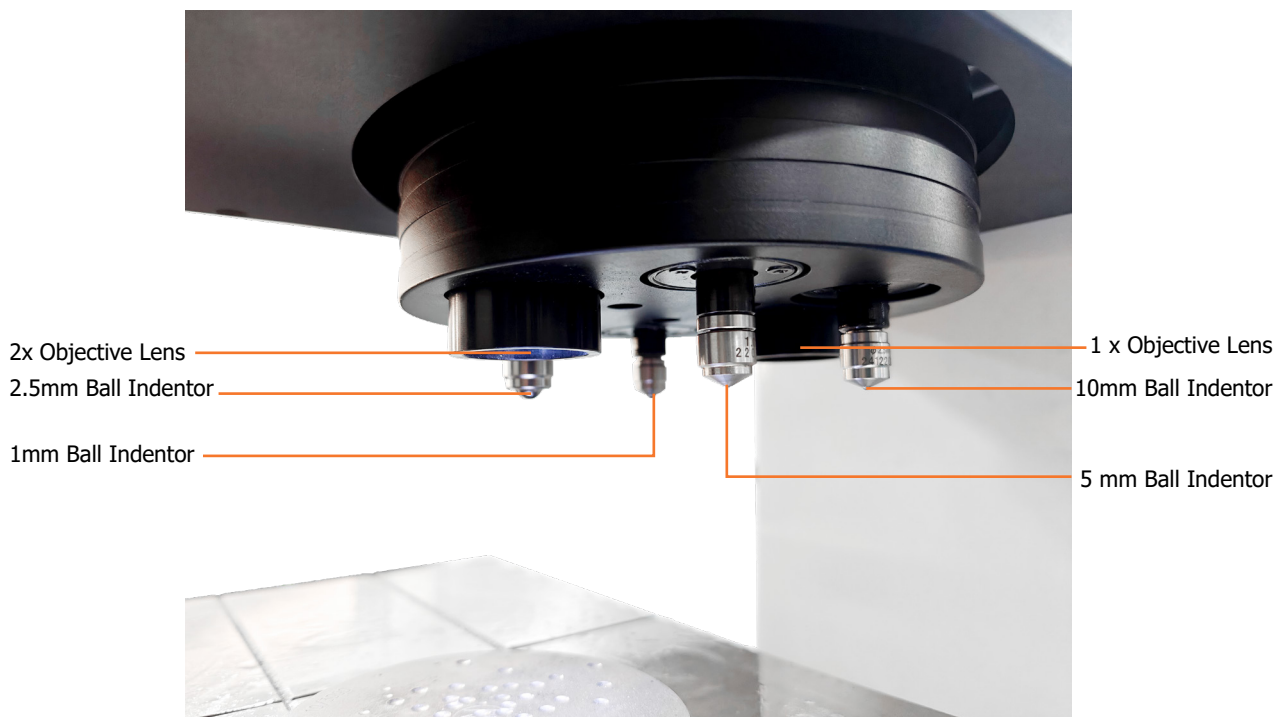
Interface Display

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.

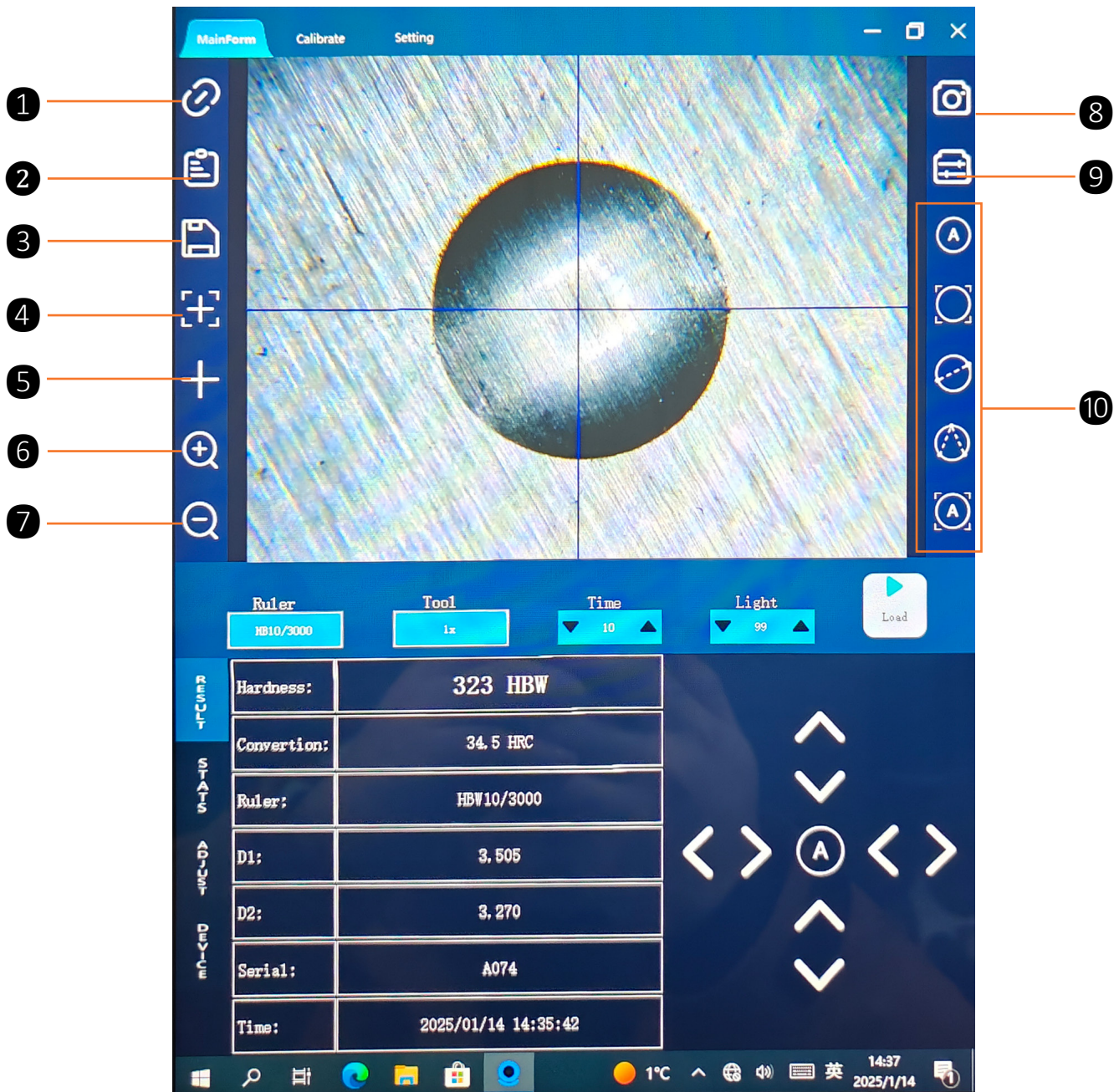
Indenter & Objective Lens



- 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

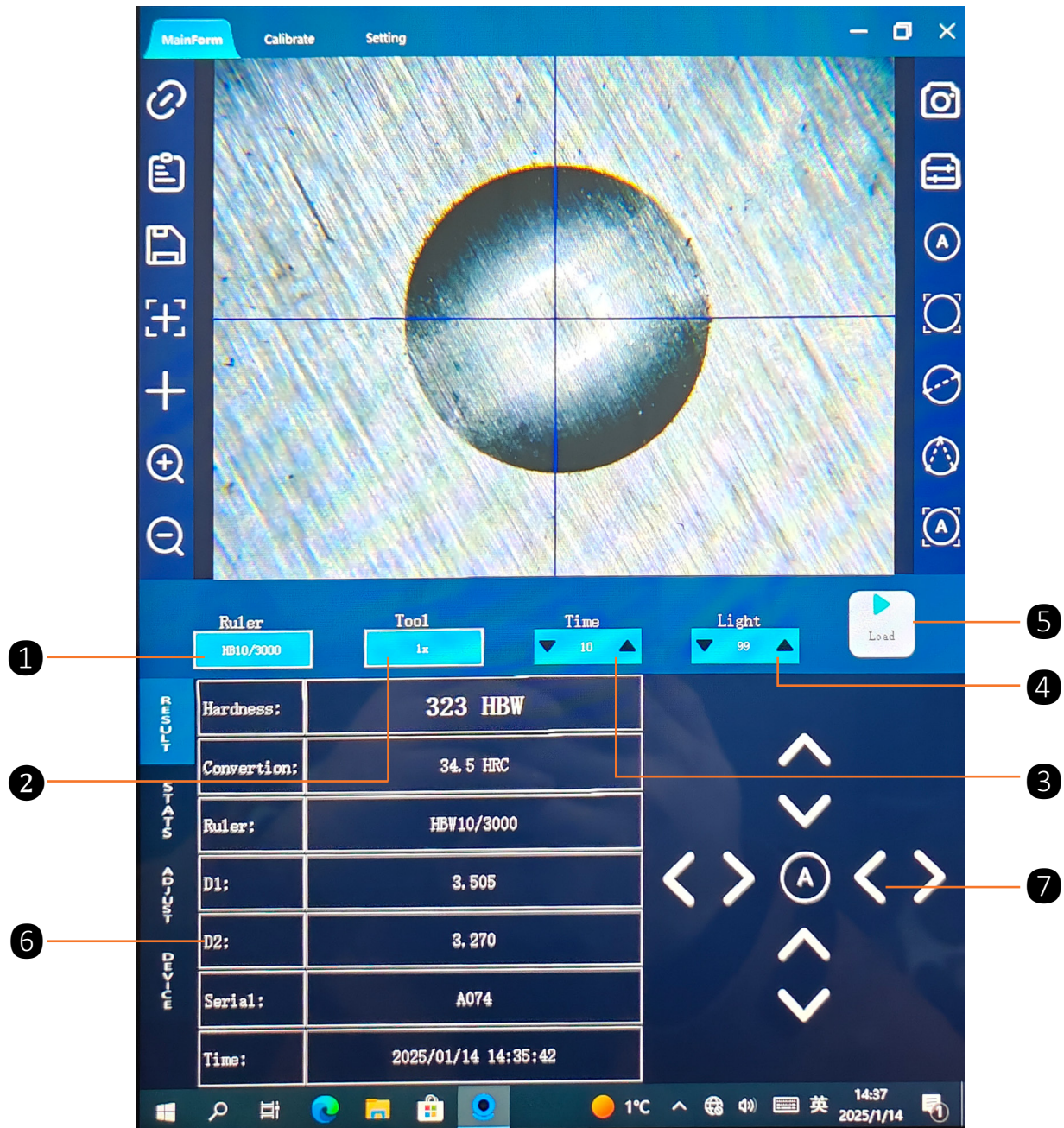
Main Screen Interface



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

Interface Display

Main Screen Interface



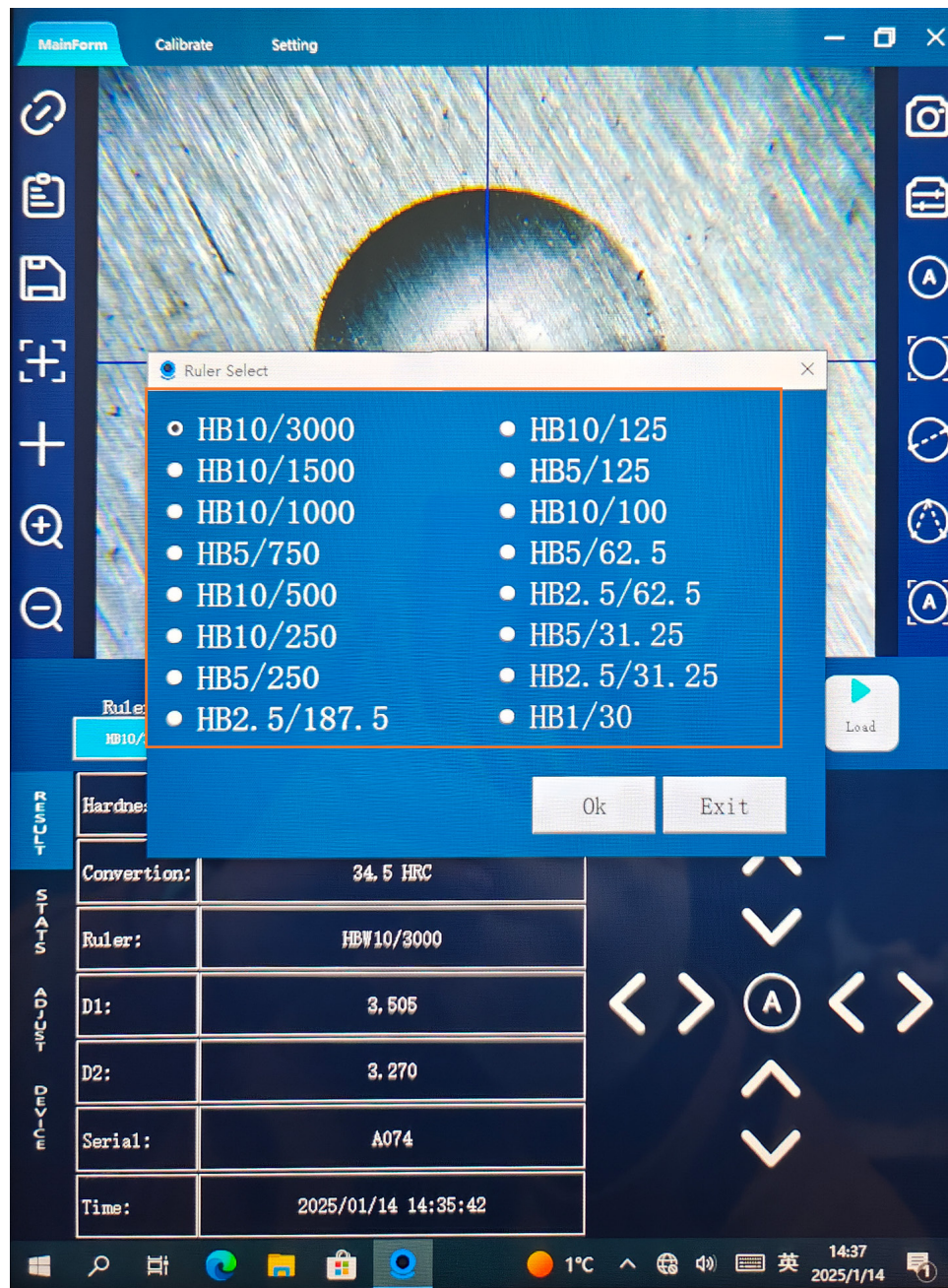
1.Brinell Hardness Scales
4.Illumination Adjusting
7.Hardness Fine Adjusting

2.Turret Switching
5.Loading

3.Dwelling Time
6.Test Result

Operation Interface

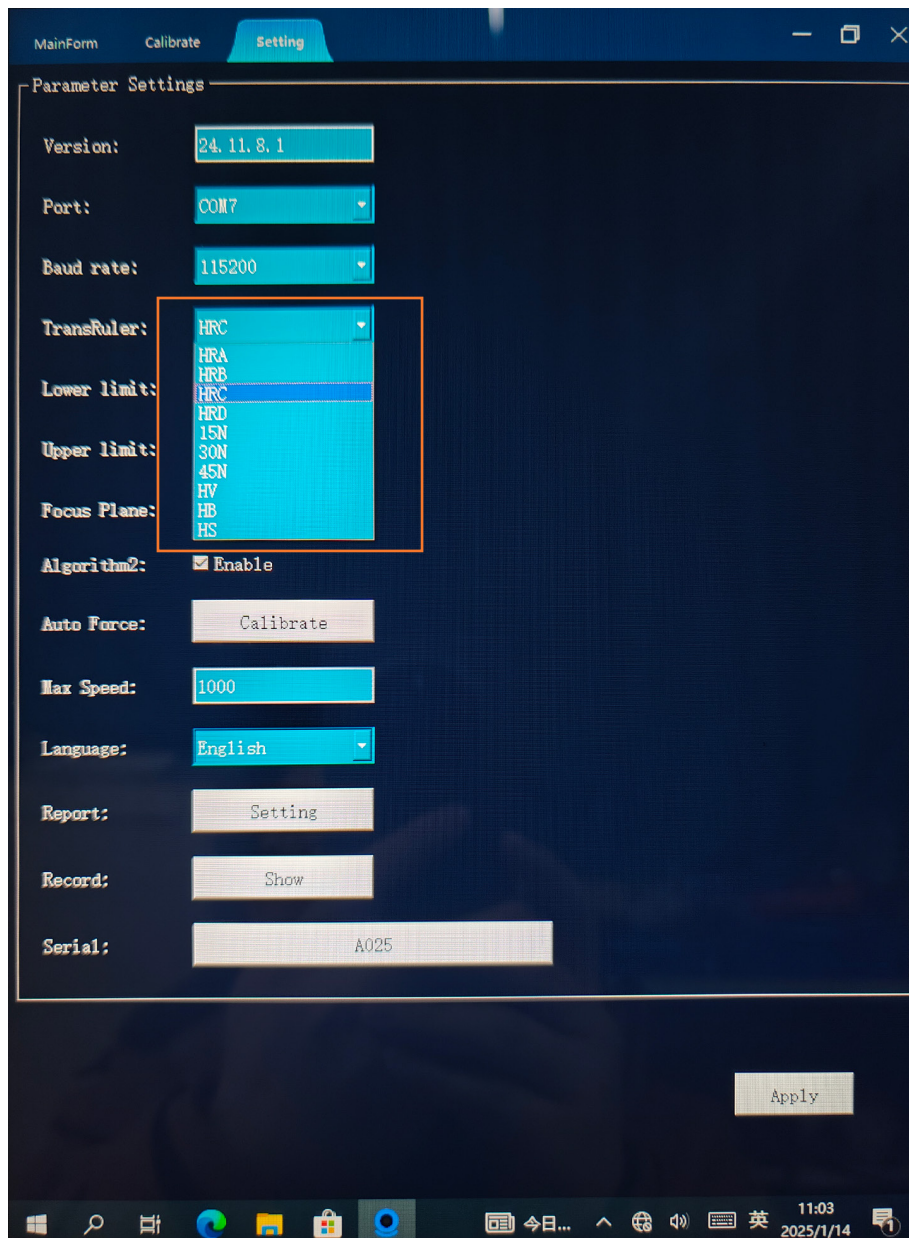
Brinell Scale Selection



- 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

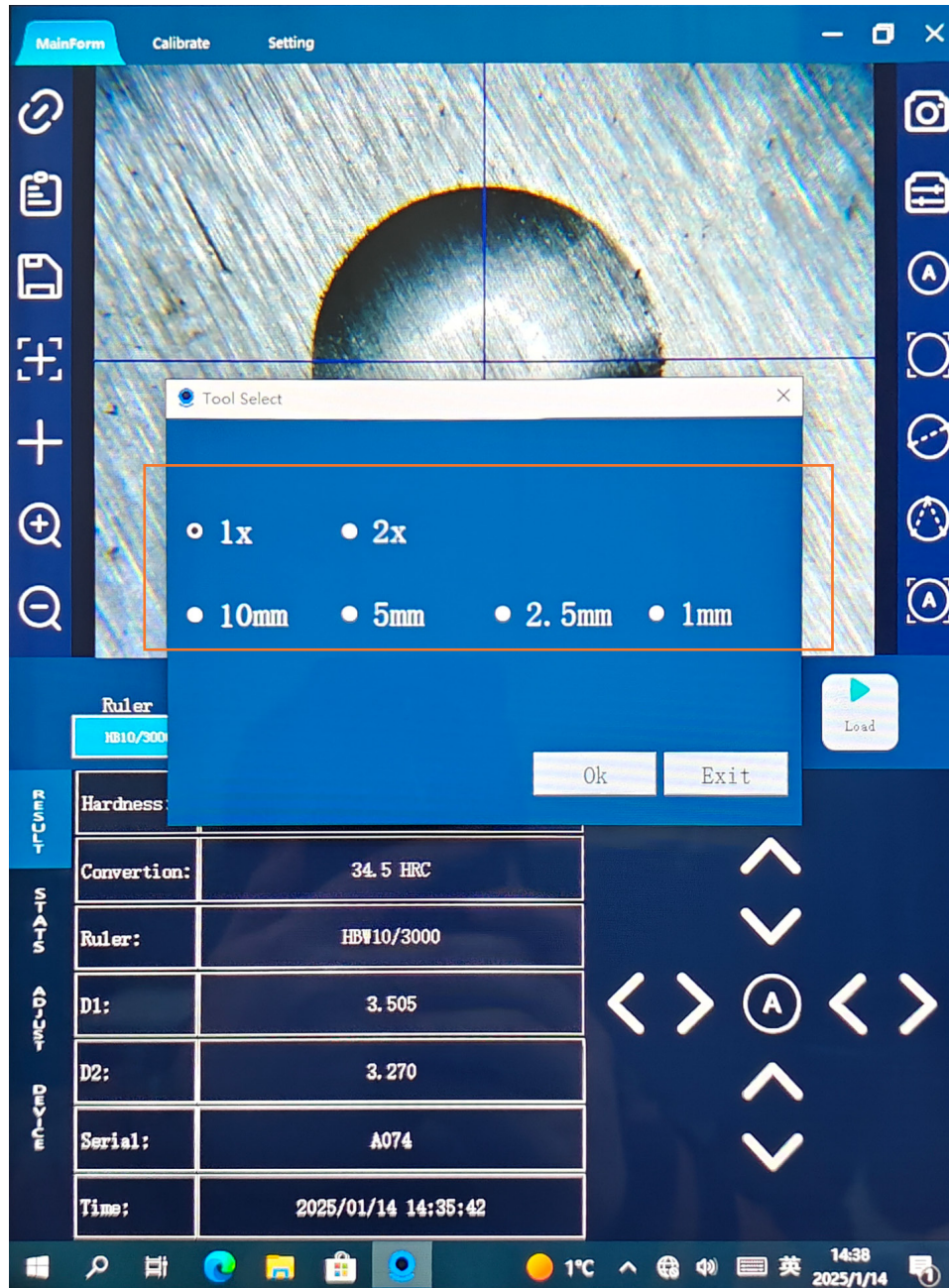
Conversion Scales



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

Operation Interface

Turret Selection

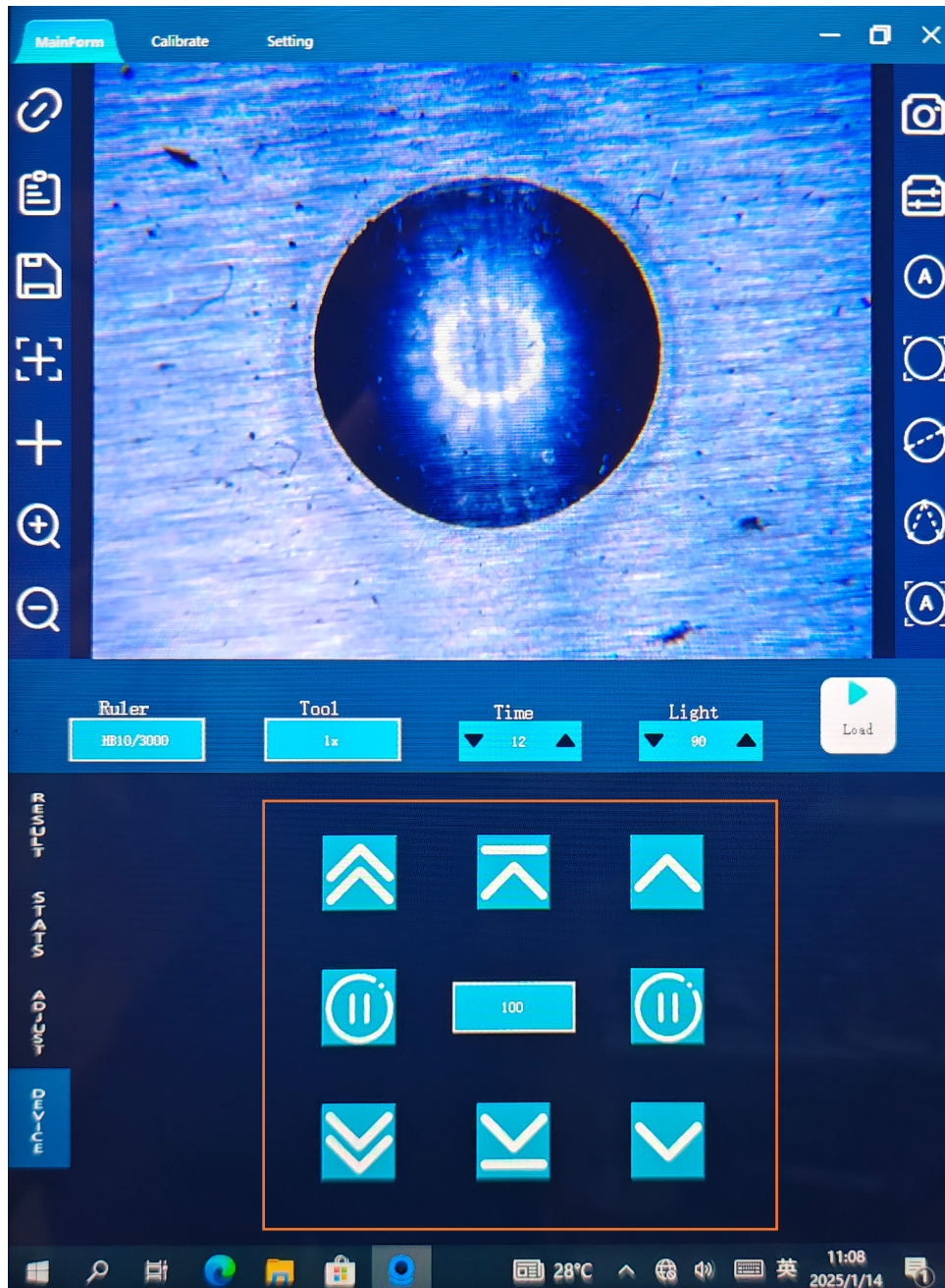


- 4 Indentors & 2 Objective Lens Switching

There are 4 sizes of indentors 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

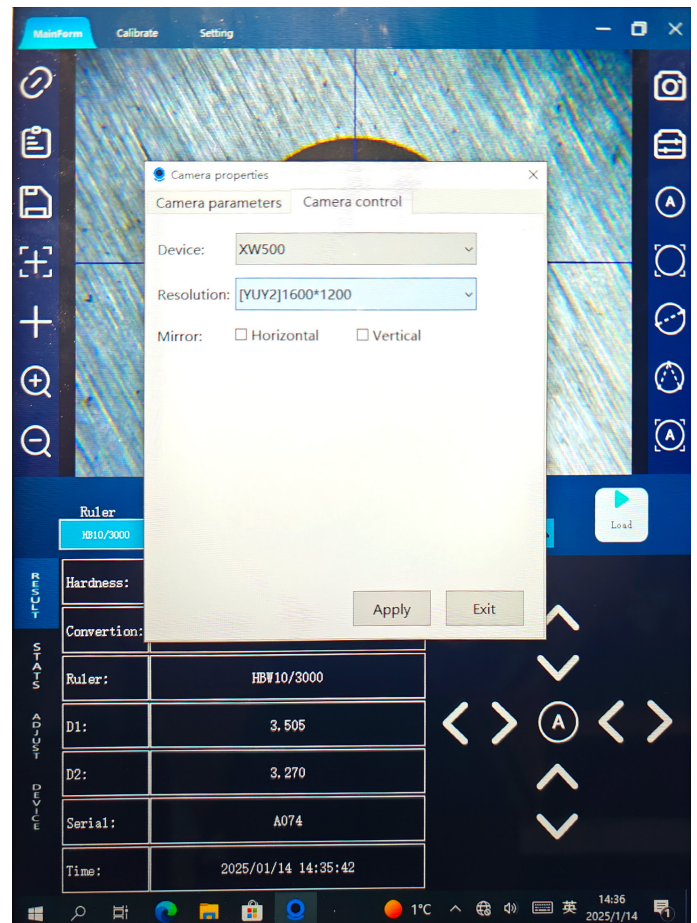
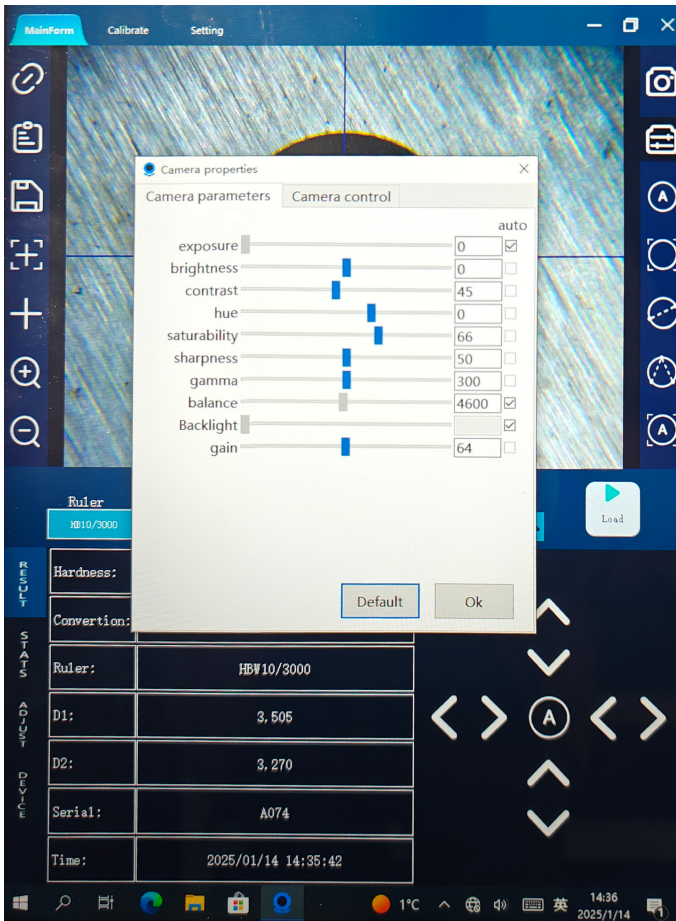


- Auto Z-axis movement control

Control the lifting and stopping of the lifting rod, the lifting speed can be selected.

Operation Interface

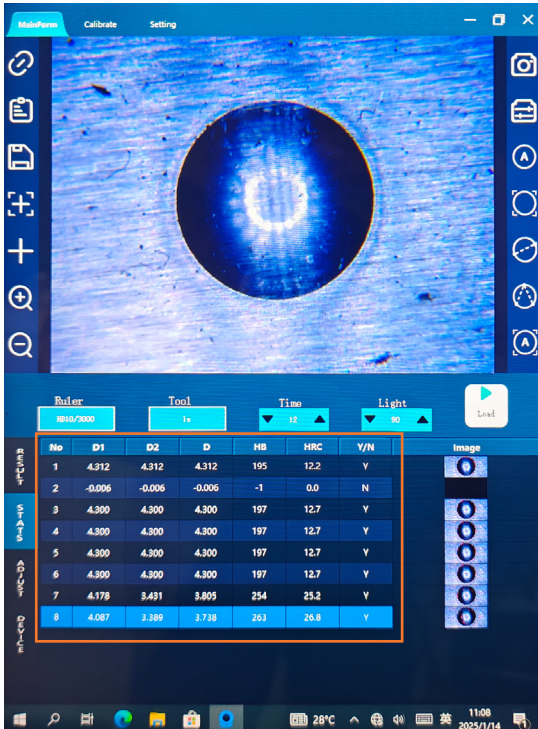
Camera Setting



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

Operation Interface

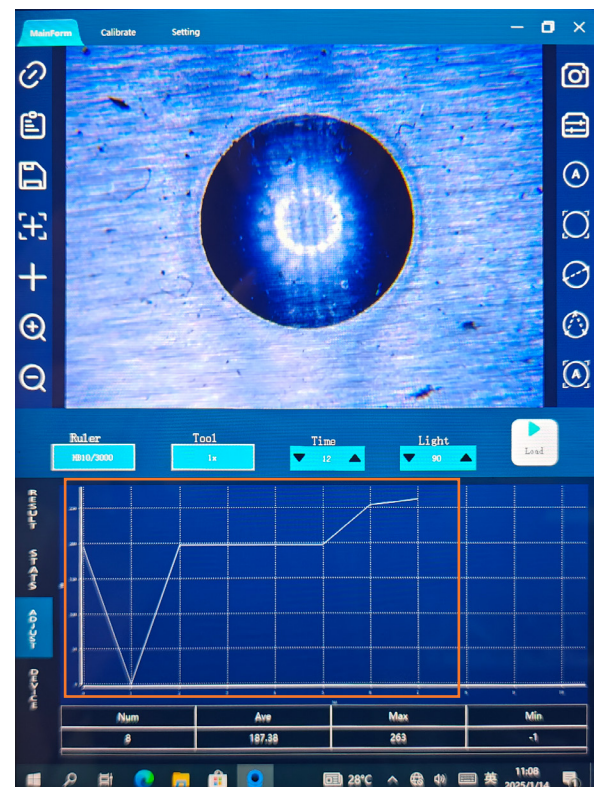
Data Statistics



- 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.

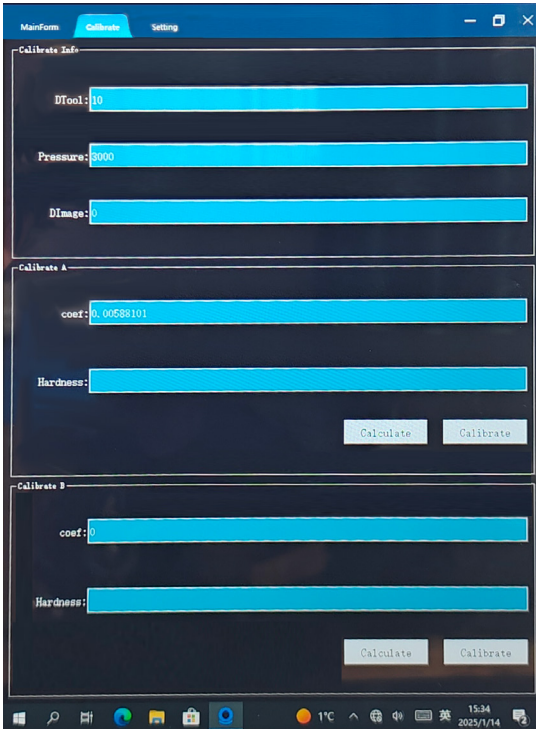
Curve Graph

- 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.

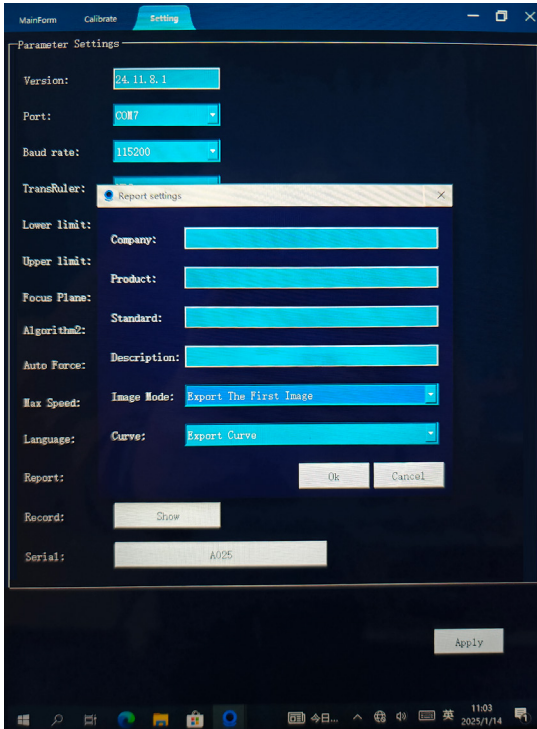
Setting

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



Operation Interface

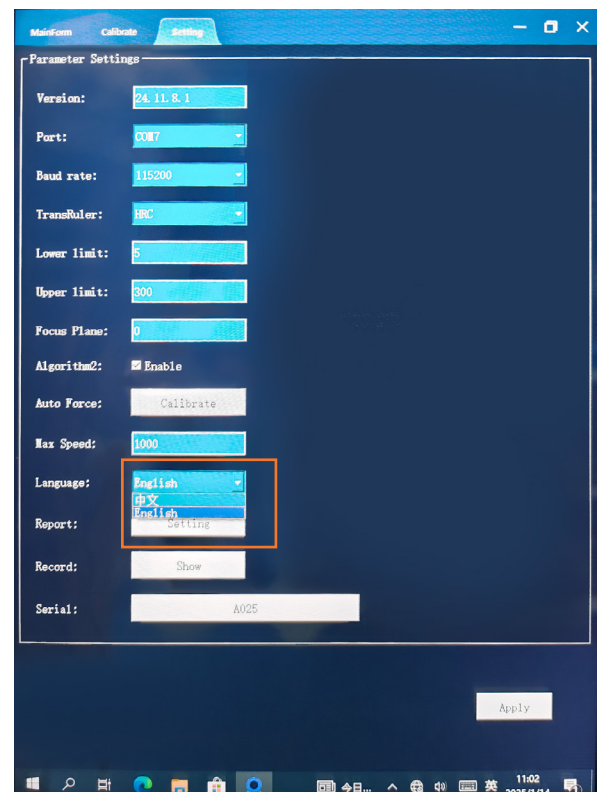
Report Setting



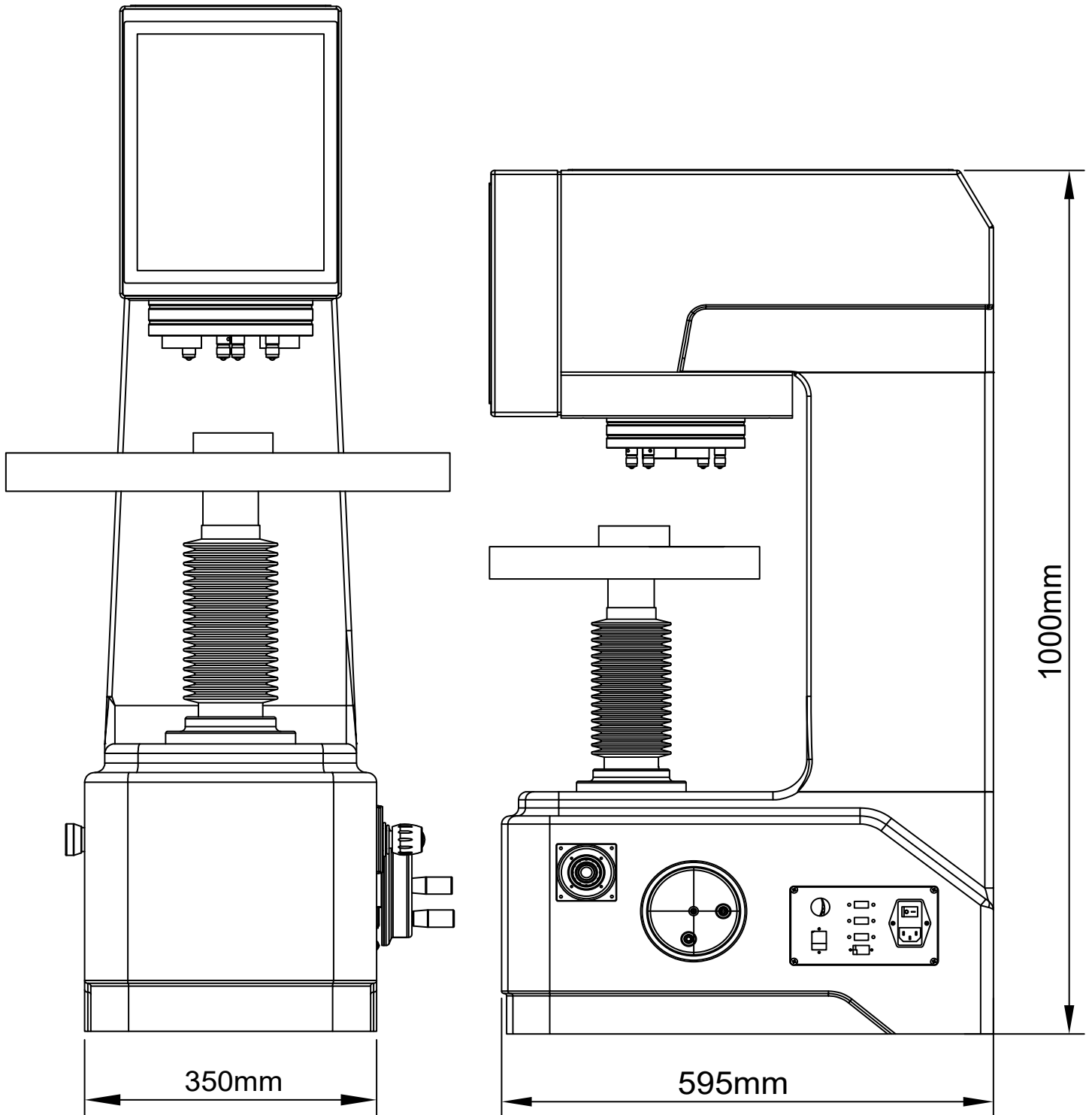
- Select the content of the output report, which can include indentation images and data statistical curve graphs.

Language Choice

- Support English or Other Customized Languages.



Instrument Dimension








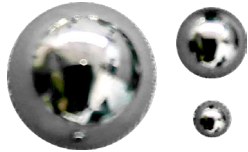
Technical Specification

Name	Intelligent Fully Automatic Brinell Hardness Tester (4 Indentors+2 Objective Lens)
Model	MBrin-3000A
Test Force	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
Hardness Scales	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
Conversion Scales	HRA、HRB、HRC、HRD、HS、HV、HB、HR15N、HR30N、 HR45N
Loading Method	8~650HBW
Test Height	Auto Loading/Dwelling/Unloading
Test Throat	280mm
Main Test Force Loading Time	200mm
Test Height (mm)	5~8s
Dwelling Time	0~99s

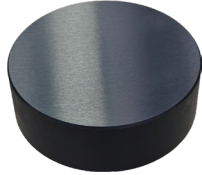

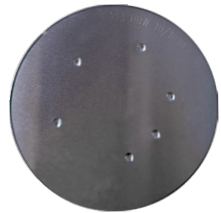
Technical Specification

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

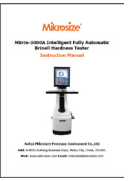

Standard Delivery

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

Standard Delivery

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