

# iBrin-3000SA

## Image Processing Semi-auto Brinell Hardness Tester



Video



### Contact us

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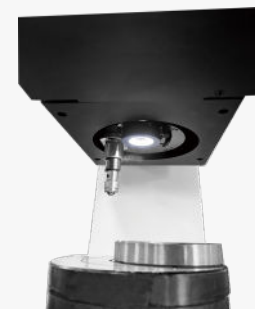
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## Features And Applications

### Product Features

- Closed loop loading, ready to use upon startup. 10-inch touch screen, easy to use and operate.
- Cmos directly captures indentation images.
- 10-level test force with 15 brinell hardness test scales for flexible selection.
- Automatic turret simultaneously installs indenter and objective lens, both automatically engaged in testing.
- Automatically switches objective lens and indenter based on selected scale.
- Pre-sets test force holding time and adjusts indentation measurement light intensity.
- Real-time display of loading time.
- Displays indentation length, hardness value, measurement count, etc.
- Test results convertible between common hardness scales.
- Hardness test results printable.
- Multiple communication interfaces: USB, RS232, WLAN, RJ45LAN.



### Product Applications

- Detects raw material hardness during machining to select suitable processes and tools.
- Inspects hardness of mechanical parts (gears, bearings, bolts, etc.) To ensure compliance with design and performance requirements.

## Instrument Appearance



**1. Display Screen**

**2. Indenter**

**3. Test Table**

**4. Lifting Column**

**5. Handwheel**

**6. Interfaces And Switches**



**1. Start Button**

**2. Security Dongle Interface**

**3. Power Switch**

**4. Power Cord Interface**

**5. Usb Interface**

**6. RJ45LAN Interface**

## Product Details

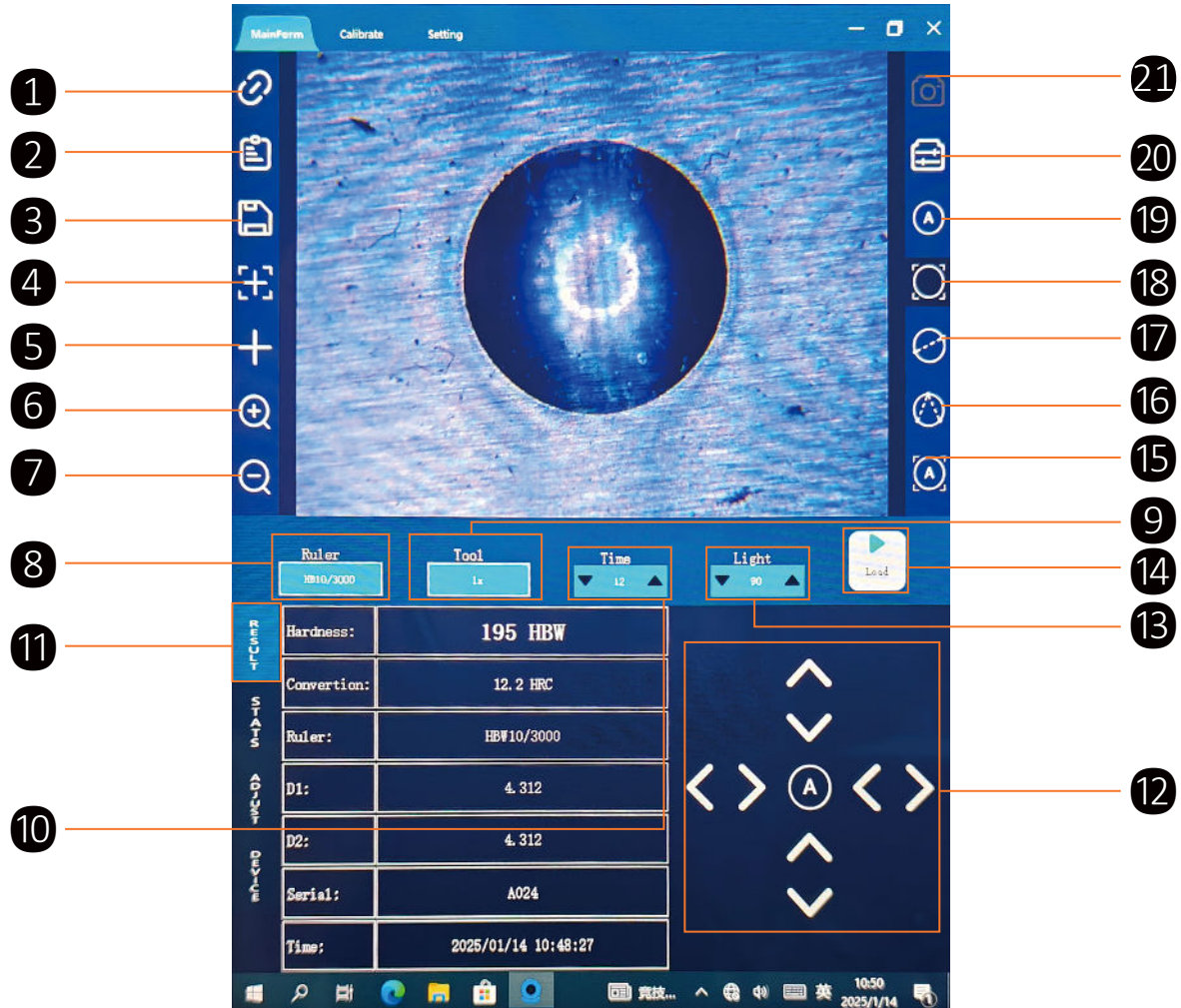


- Automatic Turret Has 2 Stations For Simultaneous Installation Of Indenter And Objective Lens. Turret Automatically Switches To Lens After Testing For Indentation Observation.



- Multiple Communication Interfaces: RS232, USB, RJ45LAN.

## Product Functions



**1.Connect Device**

**2.Open Image**

**3.Save Image**

**4.Crosshair Reset**

**5.Crosshair**

**6.Zoom In**

**7.Zoom Out**

**8.Test Scale**

**9.Indenter/Lens Switch**

**10.Dwell Time**

**11.Test Results**

**12.Hardness Fine Adjustment**

**13.Brightness Adjustment**

**14.Load Button**

**15.Areaauto-Measurement**

**16.Three-Point Circle Manual**

**Measurement**

**17.Two-Point Circle Manual Measurement**

**18.Manual Measurement**

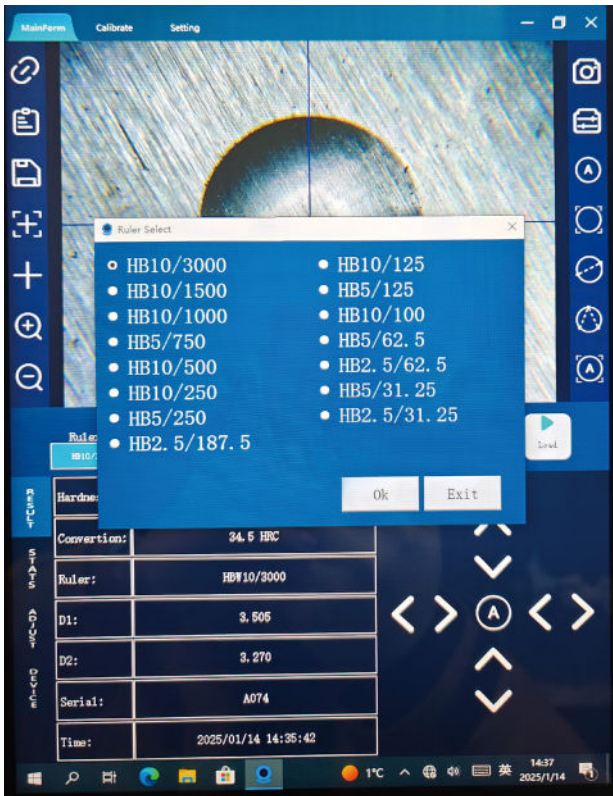
**19.Auto Measurement**

**20.Camera Settings**

**21.Camera Connection**

## Operation Interface

### Scale Selection

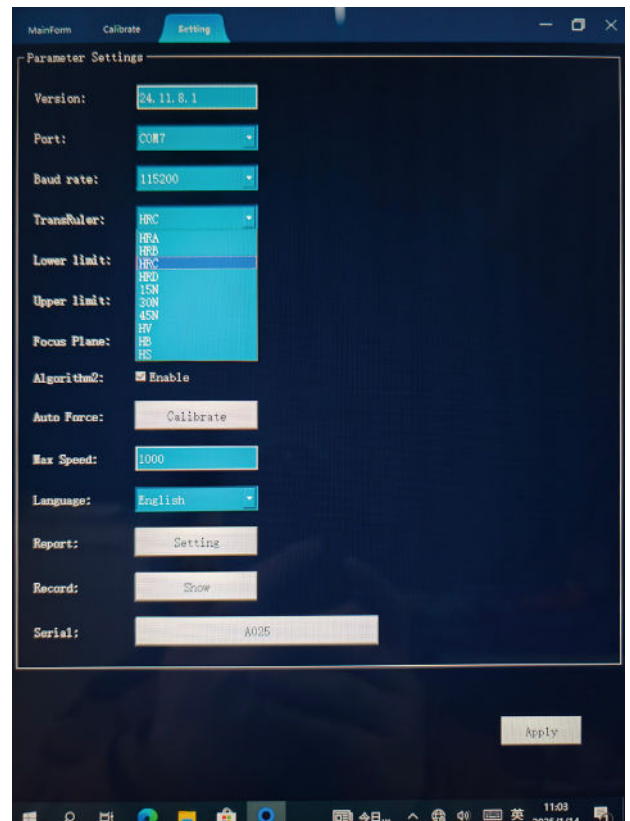


- Three Indenter Sizes With Different Test Forces Offer 15 Test Scales.

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.

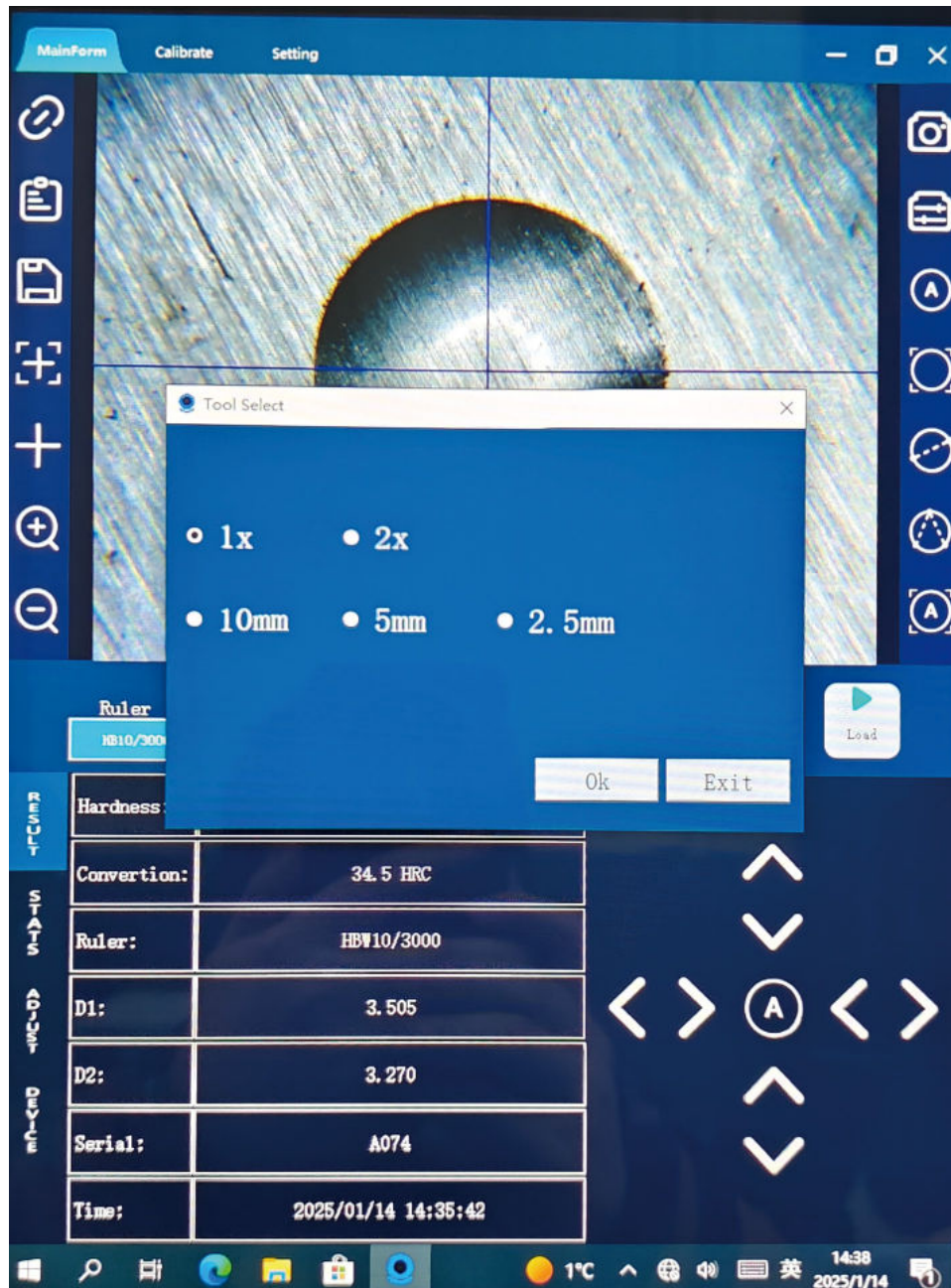
- Convertible To Common Rockwell And Vickers Scales.

HRA、HRB、HRC、HRD、HS、HV、HK、  
HBW、HR15N、HR30N、HR45N.



## Operation Interface

### Turret Selection



- Indenter And Objective Lens Are Pre-Installed. Turret Automatically Rotates To Selected Position When Clicking Corresponding Indenter/Lens Icon.

## Operation Interface

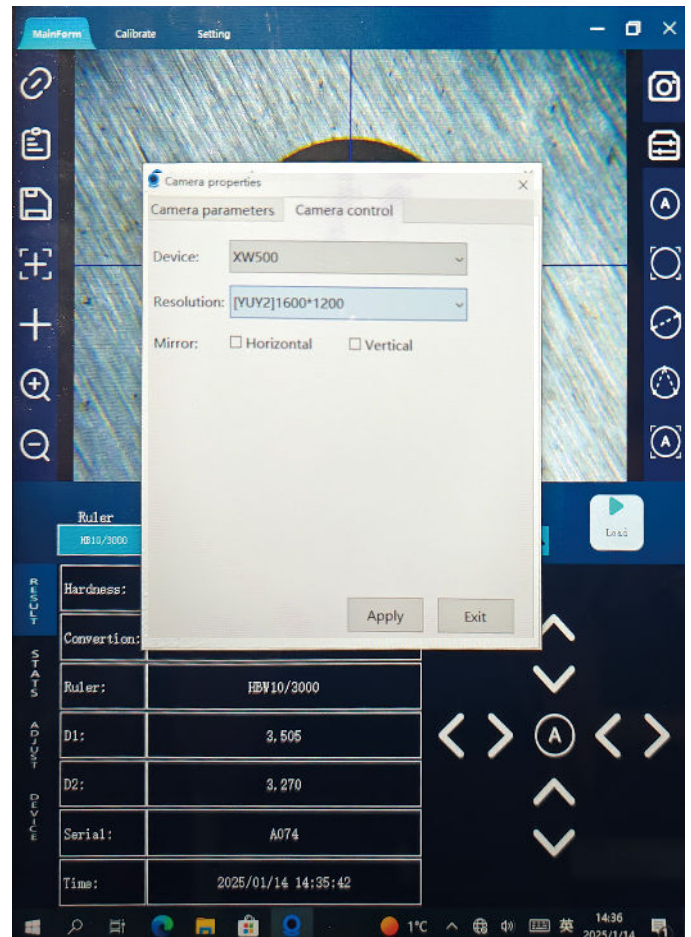
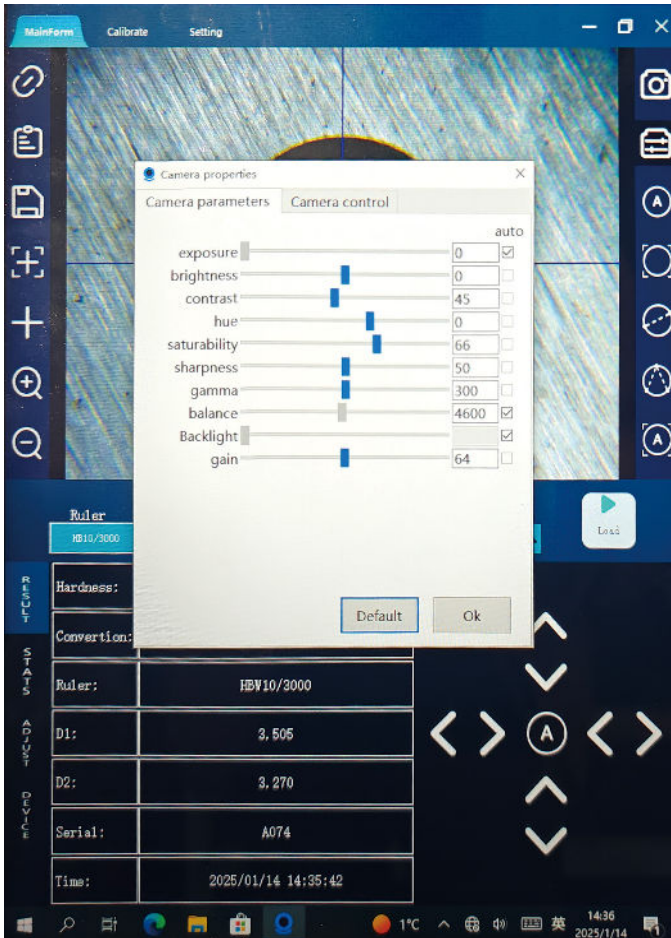
### Lifting Column Control



- Controls Lifting/Stopping With Adjustable Speed.

## Operation Interface

### Camera Settings



- Users Can Adjust Gain, Exposure, Etc. To Optimize Image Quality.

## Operation Interface

### Data Statistics

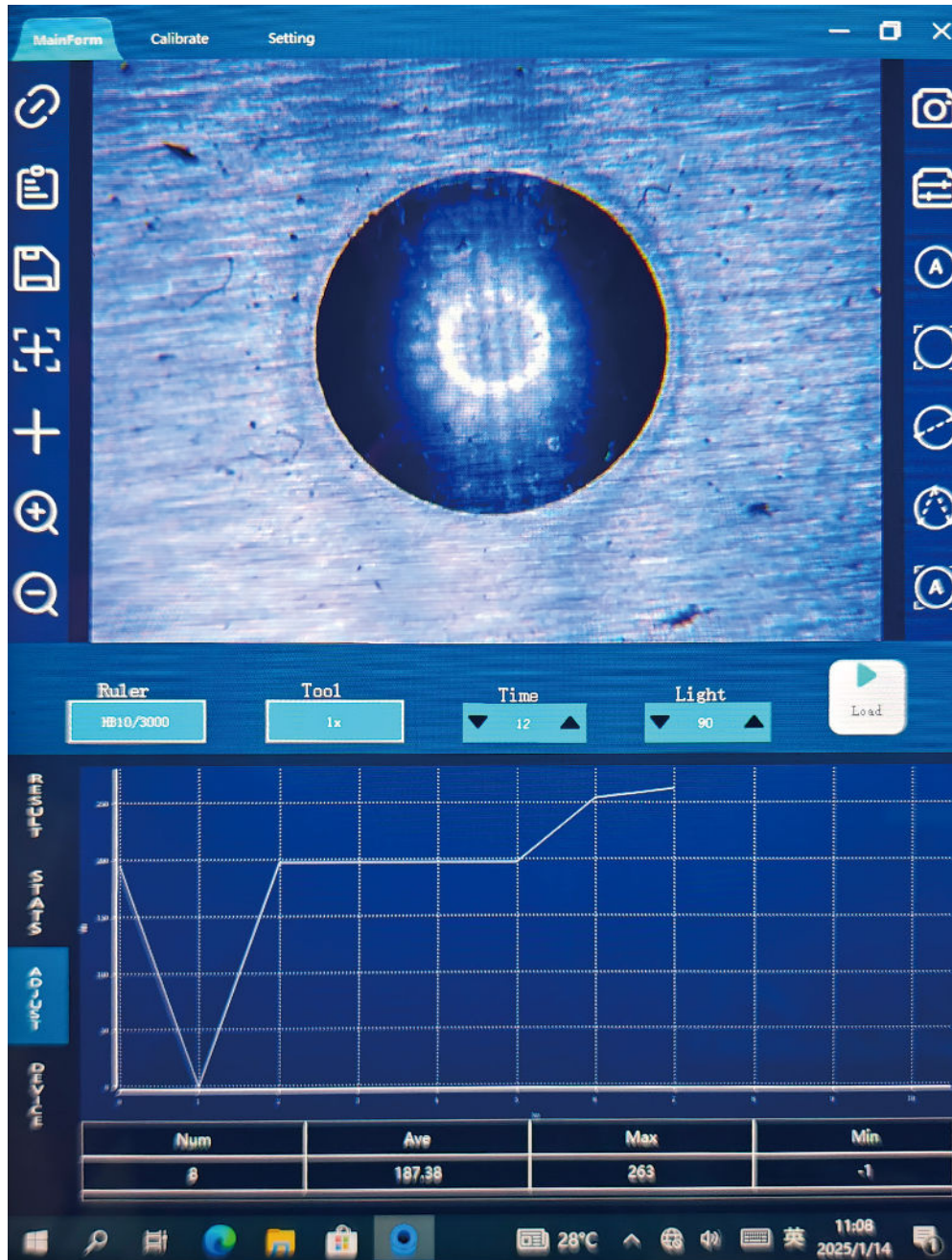
The screenshot displays the Mikrosize software interface. At the top, there are tabs for 'MainForm', 'Calibrate', and 'Setting'. The central area shows a microscope image of a circular indentation on a metal surface. Below the image is a control panel with 'Ruler' (HB10/3000), 'Tool' (1x), 'Time' (12), and 'Light' (90) settings. A 'Load' button is also present. Below the control panel is a data table with columns for 'No', 'D1', 'D2', 'D', 'HB', 'HRC', 'Y/N', and 'Image'. The table contains 8 rows of data. On the left side of the table, there are vertical labels: 'RESULT' for rows 1-2, 'STATS' for rows 3-5, 'ADJUST' for row 6, and 'DEVICE' for rows 7-8. On the right side of the table, there are small thumbnail images corresponding to each row.

No	D1	D2	D	HB	HRC	Y/N	Image
1	4.312	4.312	4.312	195	12.2	Y	
2	-0.006	-0.006	-0.006	-1	0.0	N	
3	4.300	4.300	4.300	197	12.7	Y	
4	4.300	4.300	4.300	197	12.7	Y	
5	4.300	4.300	4.300	197	12.7	Y	
6	4.300	4.300	4.300	197	12.7	Y	
7	4.178	3.491	3.805	254	25.2	Y	
8	4.087	3.389	3.738	263	26.8	Y	

- Records Test Data Including Indentation Size, Hardness Value, Converted Hardness Value, And Indentation Images.

## Operation Interface

### Graphs



- Generates data graphs for intuitive result visualization.

## Operation Interface

### Calibration

MainForm Calibrate Setting

Calibrate Info

DTool: 10

Pressure: 3000

DImage: 0

Calibrate A

coef: 0.00588101

Hardness:

Calculate Calibrate

Calibrate B

coef: 0

Hardness:

Calculate Calibrate

15:34 2025/1/14

- Calibrate Using Standard Hardness Blocks. Must Calibrate The Currently Used Objective Lens; Otherwise Invalid.

## Operation Interface

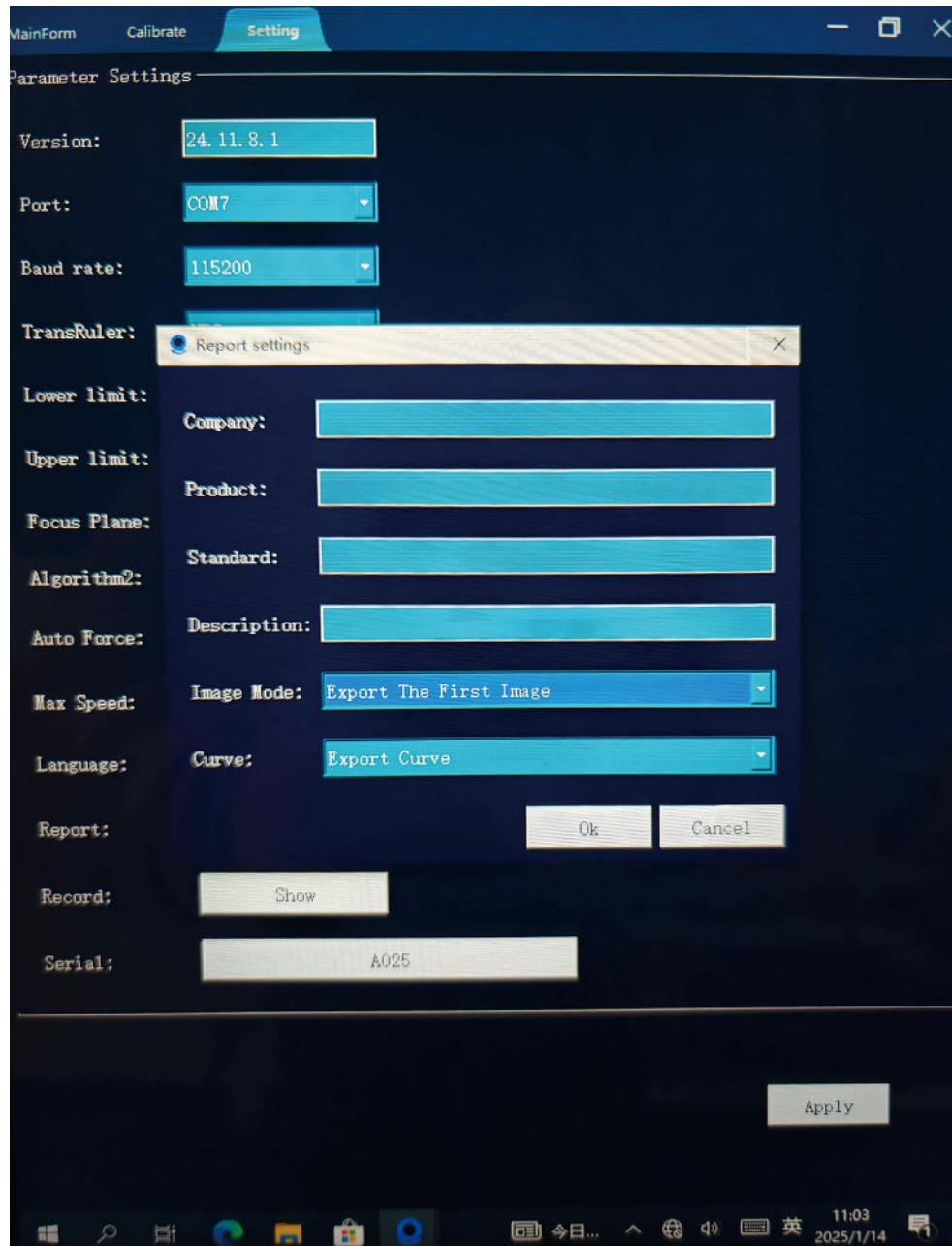
### Settings



- Device Serial Port Selection; Conversion Scale Selection; Upper/Lower Limit Setting; Lifting
- Column Speed Setting; Display Language Selection.

## Operation Interface

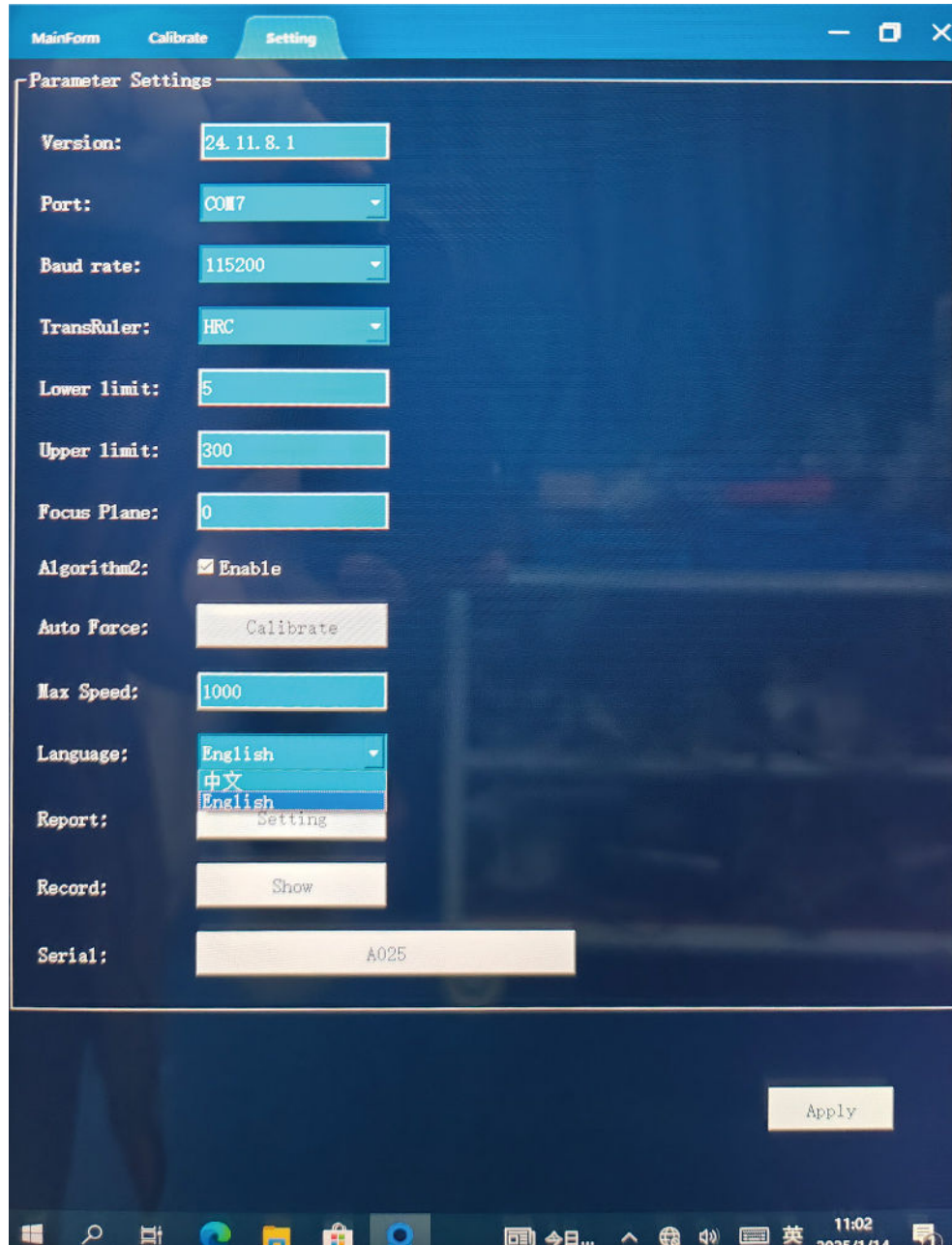
### Report Settings



- Customize Report Content (May Include Indentation Images And Data Graphs).

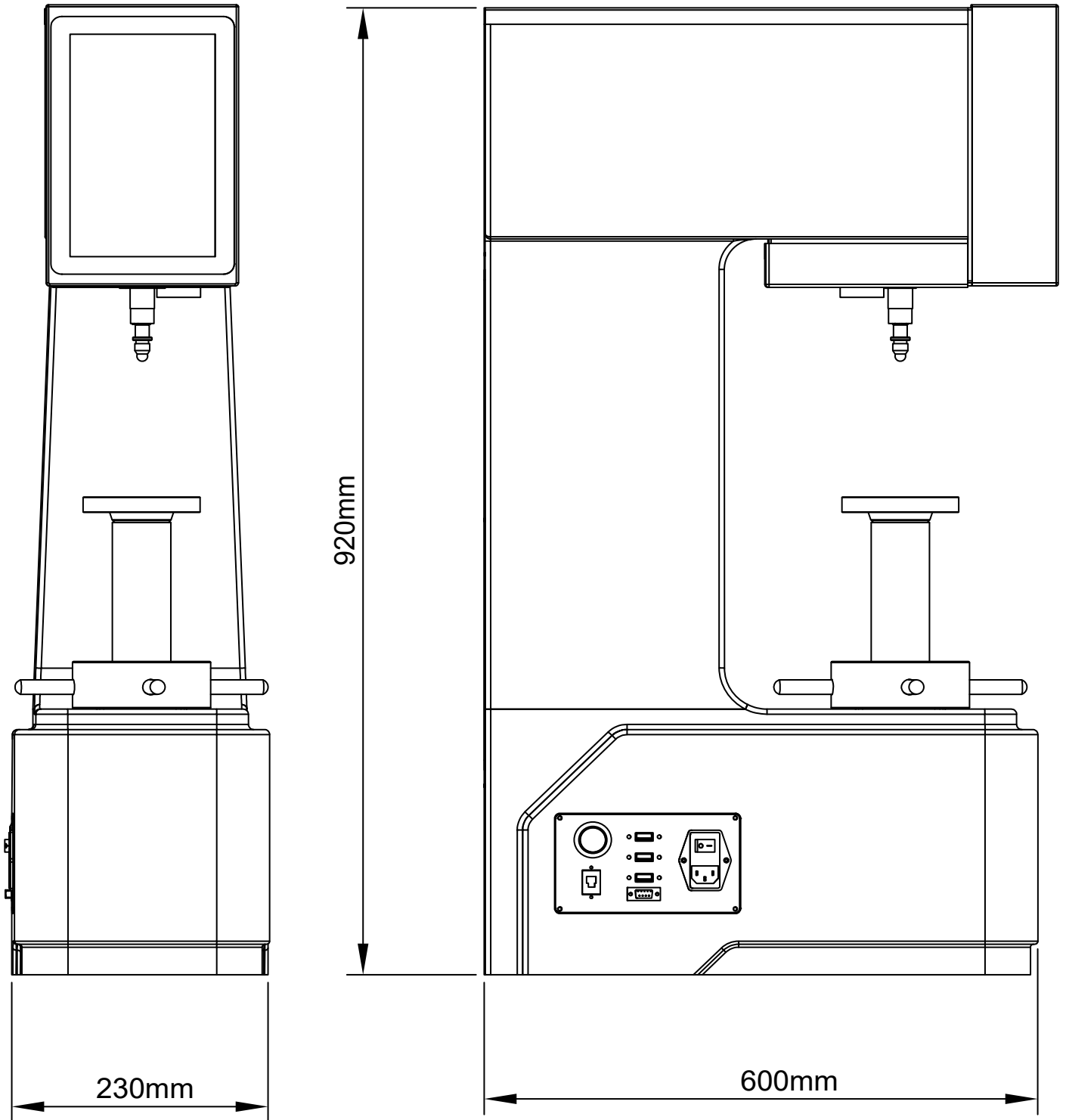
## Operation Interface

### Language Selection



- Supports Chinese/English. Other languages customizable.

## Instrument Dimension




# Technical Specification

<b>Name</b>	Image Processing Semi-auto Brinell Hardness Tester	
<b>Model</b>	iBrin-3000SA2	iBrin-3000SA3
<b>Turret Position</b>	1 Indenter + 1 Lens	1 Indenter + 2 Lenses
<b>Measurement Range</b>	8~650HBW	
<b>Test Force</b>	62.5kgf、100kgf、125kgf、187.5kgf、250kgf、500kgf、750kgf、1000kgf、1500kgf、3000kgf	
	612.9N、980.7N、1226N、1839N、2452N、4903N、7355N、8907N、14710N、29420N	
<b>Test Scales</b>	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、HRF、HV、HK、HBW、HR15N、HR30N、HR45N、HR15T、HR30T、HR45T	
<b>Indenter Specifications</b>	Φ2.5mm、Φ5mm、Φ10mm	
<b>Camera Lens</b>	20X	
<b>Objective Lens</b>	1X	1X、2X
<b>Test Height</b>	280mm	
<b>Test Throat</b>	150mm	
<b>Dwell Time Range</b>	0~99s	
<b>Hardness Readout</b>	Digital touchscreen LCD	
<b>Indenter/Lens Switching</b>	Automatic	
<b>Communication Interfaces</b>	USB、RJ45LAN、WLAN、RS232	
<b>Power Supply</b>	AC220V, 50Hz	
<b>Dimensions (mm)</b>	230*600*920mm	
<b>Net Weight</b>	130kg	

## Standard Delivery

Name	Qty	Photo
<b>Machine Mainframe</b>	1 pc	
<b>230mm Test Anvil</b>	1 pc	
<b>78mm Test Anvil</b>	1 pc	
<b>60×90mm V-block Test Anvil</b>	1 pc	
<b>Φ2.5mm Brinell Indenter</b>	1 pc	
<b>Φ5mm Brinell Indenter</b>	1 pc	
<b>Φ10mm Brinell Indenter</b>	1 pc	
<b>Φ2.5/5/10mm Tungsten Carbide Balls</b>	each 1	
<b>(150~250) HBW10/3000 Hardness Block (150~250) HBW10/3000</b>	1 pc	

## Standard Delivery

Name	Qty	Photo
(80~110) HBW10/1000 Hardness Block (80~110) HBW10/1000	1 pc	
Objective Lens	1 pc	/
2X Objective Lens	1 pc	/
Software USB	2 pcs	/
Security Dongle	1 pc	/
Fuse	1 pc	/
Dust Cover	1 pc	/
Hex Key	1 pc	/
Power Cord	1 pc	/
Product Certificate	1 pc	/
User Manual	1 pc	/

## Optional Delivery

### Optional Accessories

Tungsten carbide balls

Various work tables

Hardness test blocks

Internal machine parts

Various indenters

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