

MIDLAND METROLOGY LTD

# iBrin-3000SA

**Image Processing Semi-auto Brinell  
Hardness Tester**



# Features and Applications

## Product Features

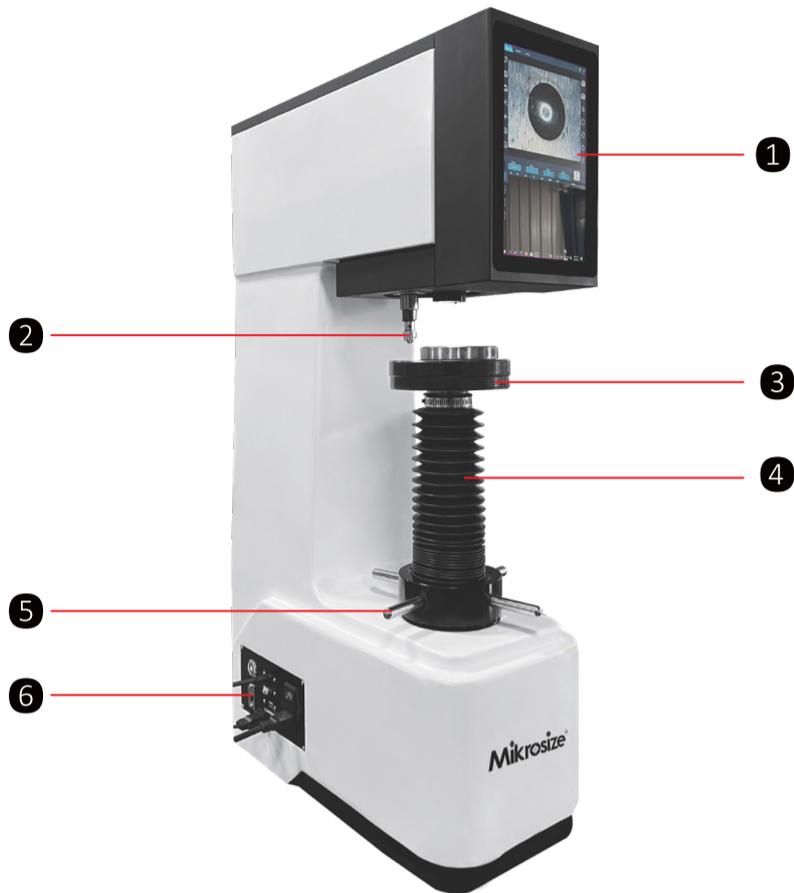
- Closed loop loading, ready to use upon startup
- 10-inch touch screen, easy to use and operate
- CMOS directly captures indentation images
- 10-level test force with 15 brinell hardness test scales for flexible selection
- Automatic turret simultaneously installs indenter and objective lens, both automatically engaged in test
- 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



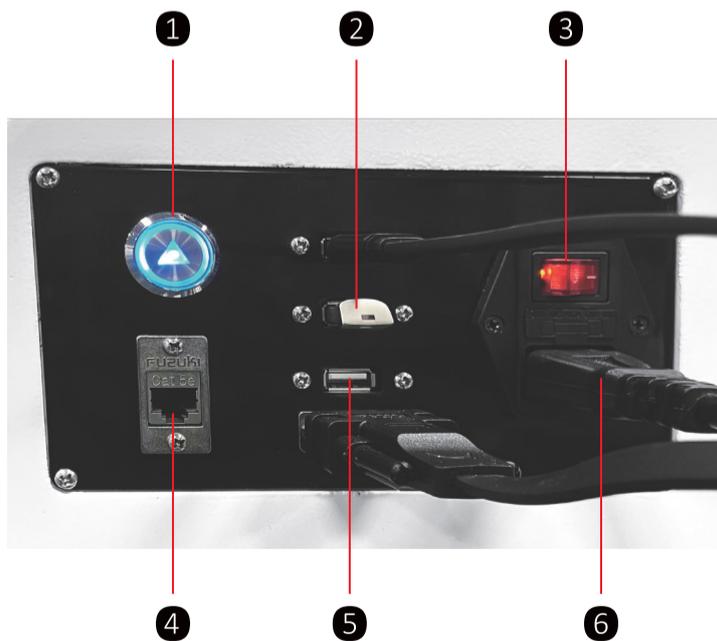
## Product Application

- 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

# Product Details



**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

Calibration

Device Connection

Documents

Save

Brinell Indentation

Cross Line

Image Zoom

Setting

Camera Connecting

Camera Setting

Measuring Function

Common Setting

Test Result

Conversion Scale

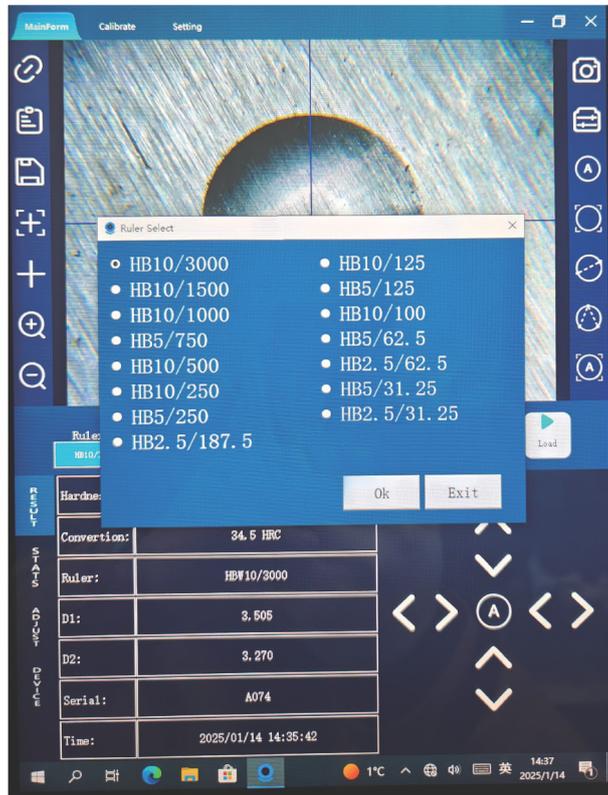
Hardness Scale

Indentation Diameter

Lifting Control

STATISTICS	
Hardness:	195 HBW
Conversion:	12.2 HRC
Ruler:	HBW10/3000
D1:	4.312
D2:	4.312
Serial:	A024
Time:	2025/01/14 10:48:27

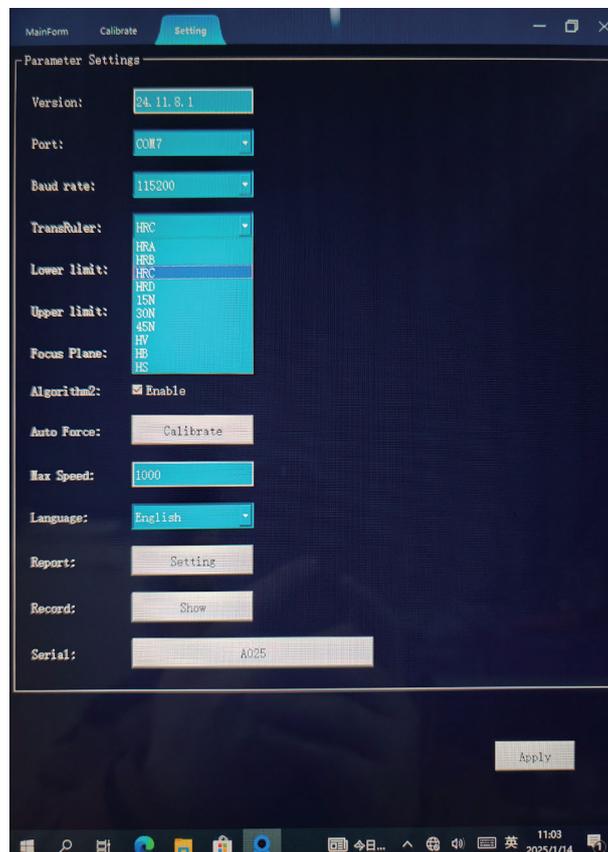
# Operation Interface



## 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

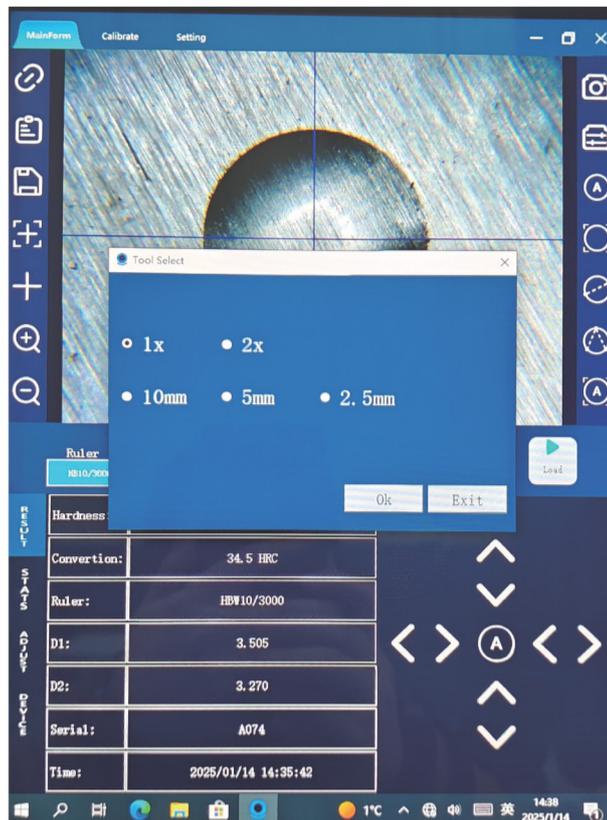


## Scale Selection

Convertible To Common Rockwell And Vickers Scales

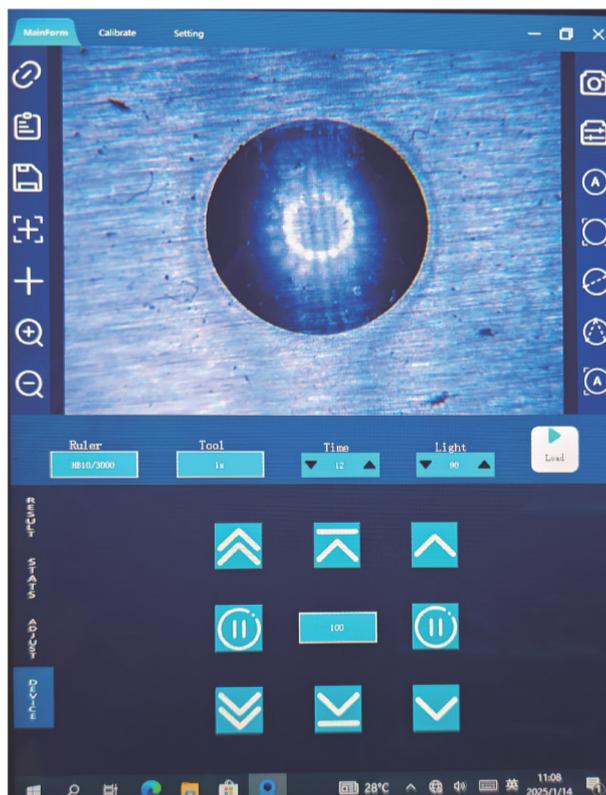
HRA, HRB, HRC, HRD, HS, HV, HK, HBW, HR15N, HR30N, HR45N

# Operation Interface



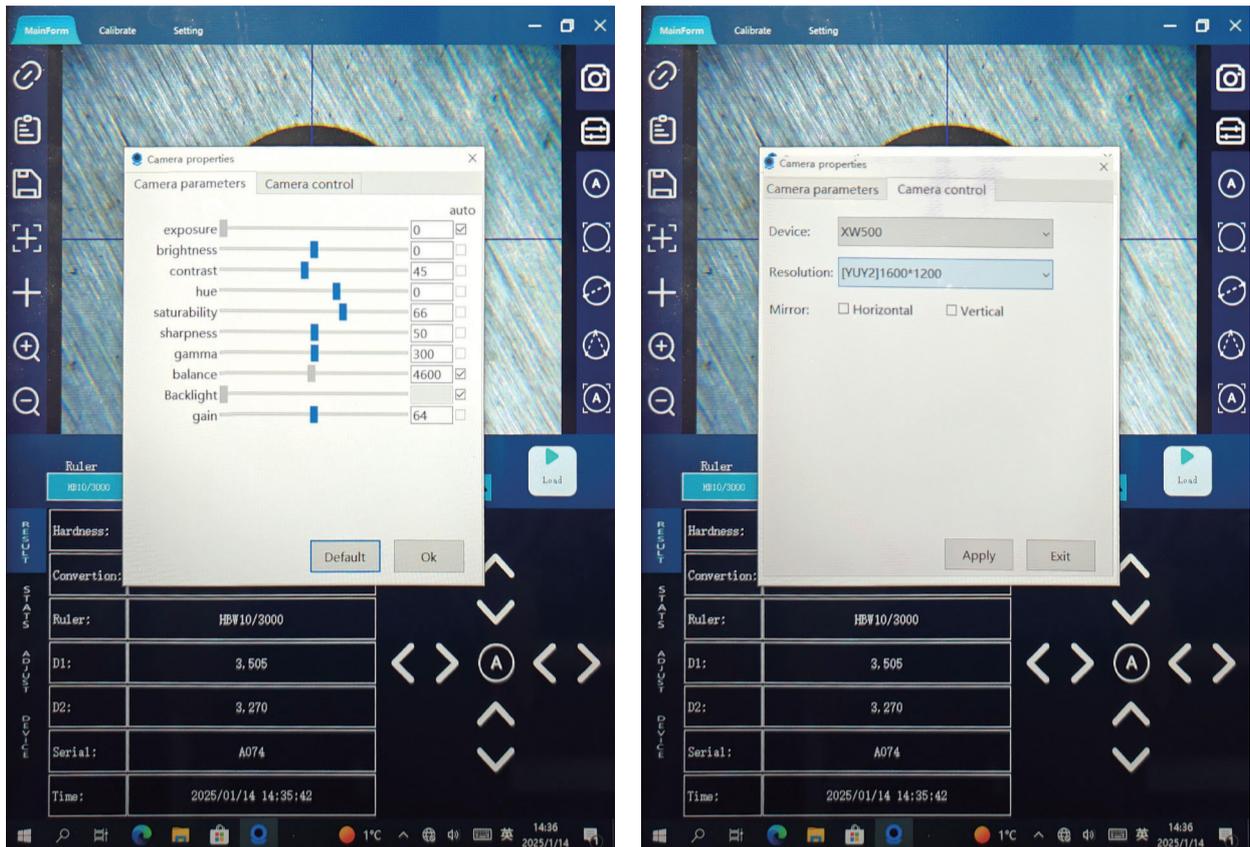
## Turret Selection

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



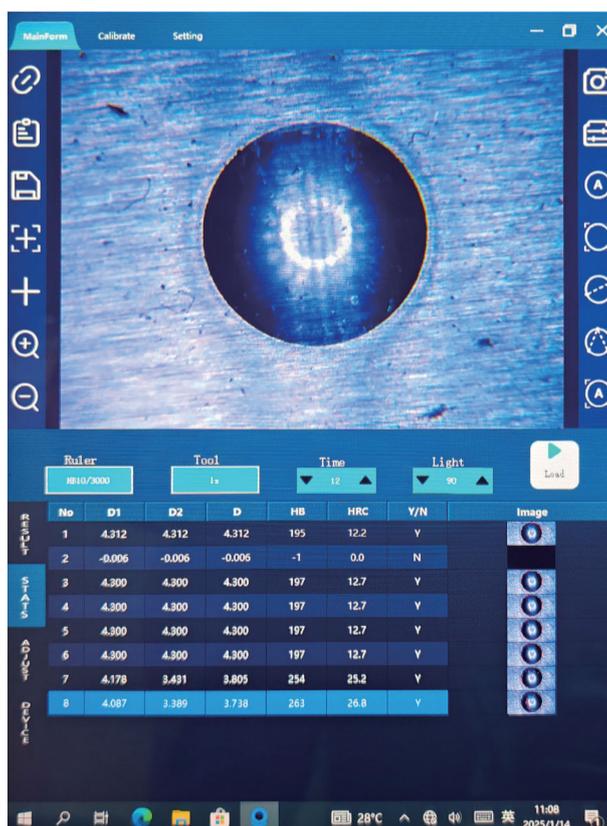
Controls Lifting/Stopping With Adjustable Speed

# Operation Interface



## Camera Settings

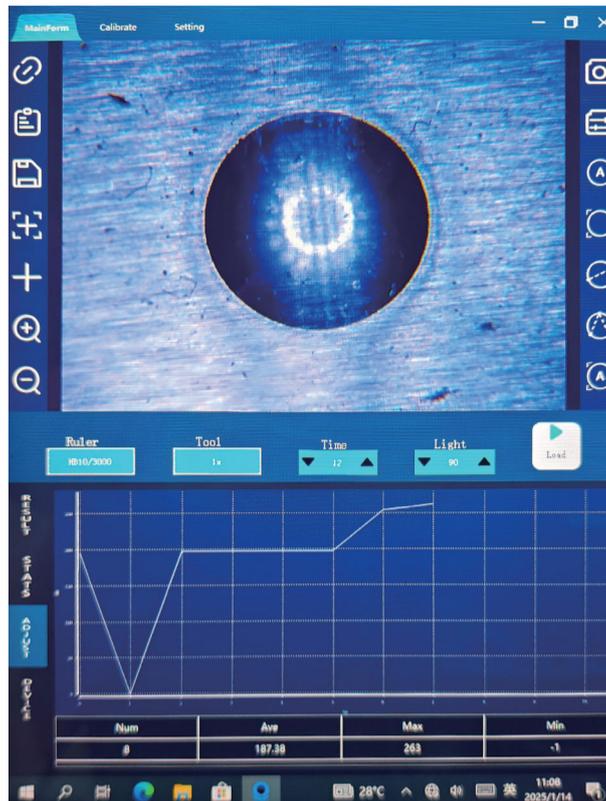
Users Can Adjust Gain, Exposure, Etc. To Optimize Image Quality



## Data Statistics

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

# Operation Interface



## Graphs

Generates Data Graphs For Intuitive Result Visualization

Calibrate Info

DTool: 10

Pressure: 3000

DImage: 0

Calibrate A

coef: 0.00588101

Hardness: [input field]

Calculate Calibrate

Calibrate B

coef: 0

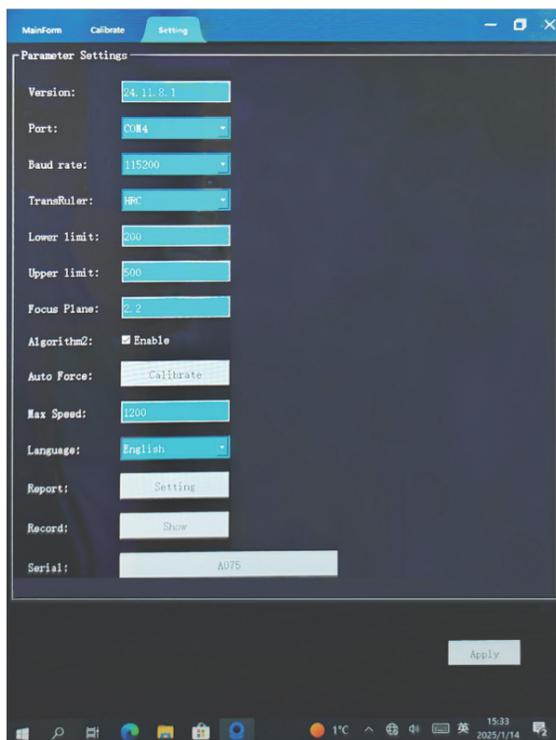
Hardness: [input field]

Calculate Calibrate

## Calibration

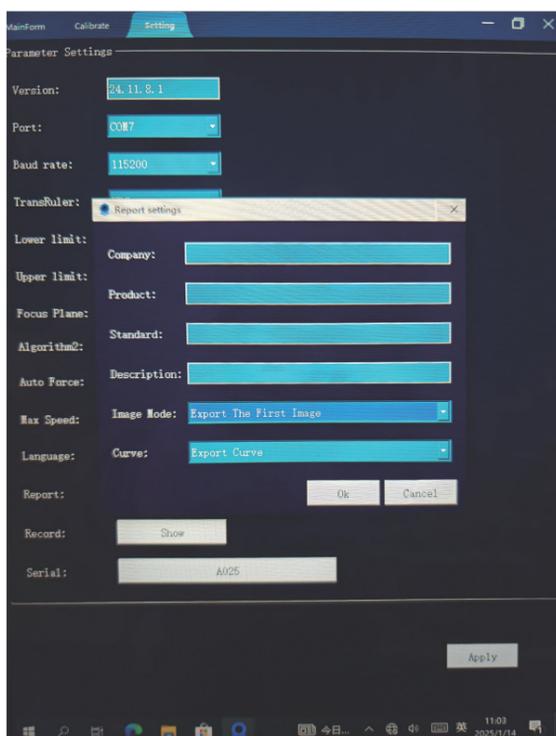
Calibrate Using Standard Hardness Blocks. Must Calibrate The Currently Used Objective Lens; Otherwise Invalid

# Operation Interface



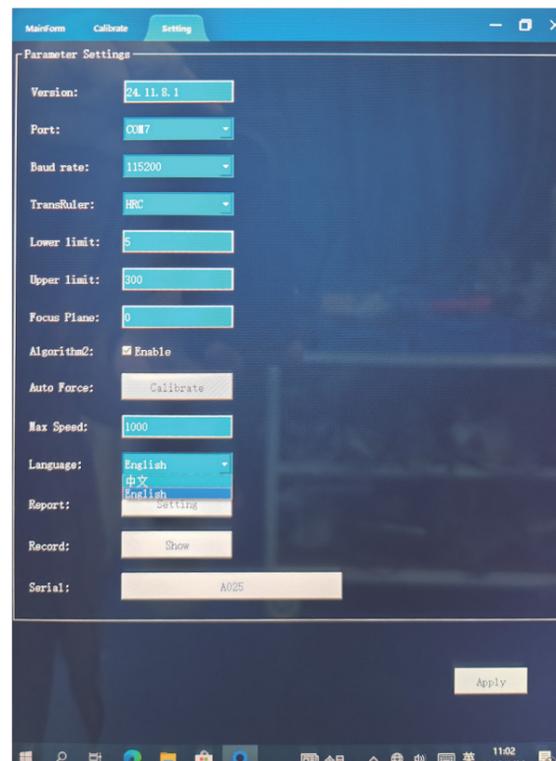
## Settings

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



## Report Settings

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



## Language Selection

Supports Chinese/English. Other Languages Customizable.

# 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 62.5kgf、100kgf、125kgf、187.5kgf、 250kgf、500kgf、750kgf、1000kgf、1500kgf、3000kgf	
<b>Test Force</b>	612.9N、980.7N、1226N、1839N、2452N、4903N、 7355N、8907N、14710N、29420N HBW2.5/31.25、	
<b>Test Scales</b>	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
Machine Mainframe	1	
230mm Test Anvil	1	
78mm Test Anvil	1	
60×90mm V-block Test Anvil	1	
Φ2.5mm Brinell Indenter	1	
Φ5mm Brinell Indenter	1	
Φ10mm Brinell Indenter	1	
Φ2.5/5/10mm Tungsten Carbide Balls	each 1	
(150~250) HBW10/3000 Hardness Block (150~250) HBW10/3000	1	
(80~110) HBW10/1000 Hardness Block (80~110) HBW10/1000	1	
Objective Lens	1	
2X Objective Lens	1	
Software USB	2	
Security Dongle	1	
Dust Cover	1	
Hex Key	1	
Power Cord	1	
Fuse	1	
Product Certificate	1	
User Manual	1	

# Optional Delivery

## Optional Accessories

Tungsten carbide balls

Various work tables

Hardness test blocks

Internal machine parts

Various indenters