



# iBrin-3000EV

## Electronic Touch Screen Vision Brinell Hardness Tester



Video



### Contact us

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## Product Features and Application

### Product Features

- Closed loop loading with high-precision load cell and single - chip microcomputer control ensure precise automatic loading and unloading, guaranteeing reliable test results.
- Variety of test force levels, ranging from 0.613 KN to 29.42 KN, meeting the hardness testing requirements for different materials.
- 2.5mm,5mm,10mm three carbide brinell ball indenters
- The test force dwelling time can be flexibly adjusted from 1 to 99 seconds, adapting to the characteristics of various materials and testing standards.
- The maximum test height is 280mm, and test throat is 150mm, providing ample operating space.
- Instrument function on touch screen is clearly divided, operating simple: data viewing, processing, and calibration can be easily completed.
- iBrin-3000E complies with standards such as GB/T231.2 - 2002 ensuring accuracy.

### Product Application

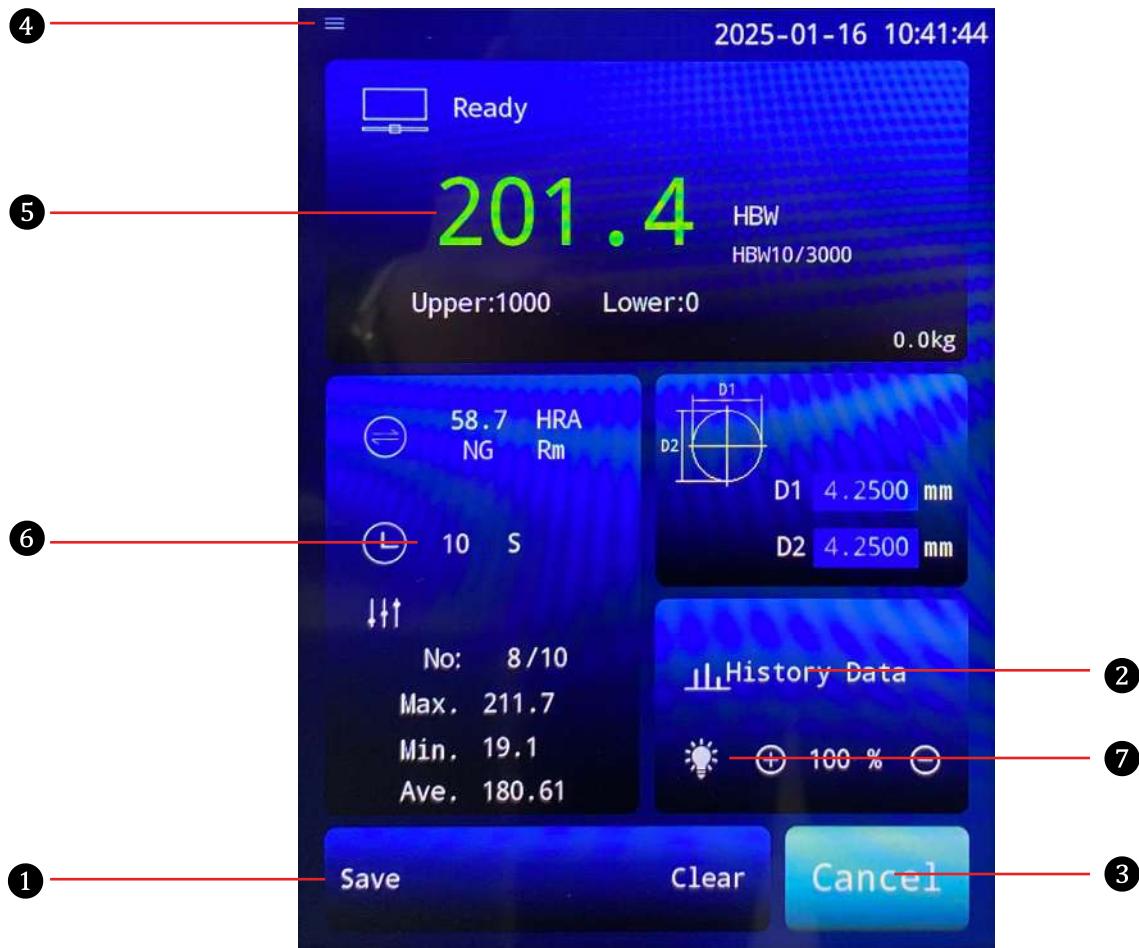
- iBrin-3000E brinell hardness tester is a bench - type machine, which is used to test the brinell hardness of annealed and normalized workpieces, cast parts, non - ferrous metals, various relatively soft components, or unquenched steel parts.
- It is suitable for use in metrology, metal metallurgy, chemical industry, machinery manufacturing, industry, as well as scientific research institutions of universities and colleges.
- Accurately detect the hardness of annealed and normalized parts to control the quality of metal processing.
- Effectively measure the hardness of cast parts to ensure stable performance of products.
- Reliably test the hardness of non - ferrous metals to support the R & D and innovation of materials.
- Precisely measure the hardness of soft components to ensure a good fit during assembly.
- Quickly identify the hardness of unquenched steel parts to improve production efficiency.



# Instrument Structure



# Touch Screen Function



1. Save: Save current test data and store it in the historical data.

2. History Data: View the previously saved historical data. You can scroll up and down to check, and also delete, print or export the historical data to a USB.

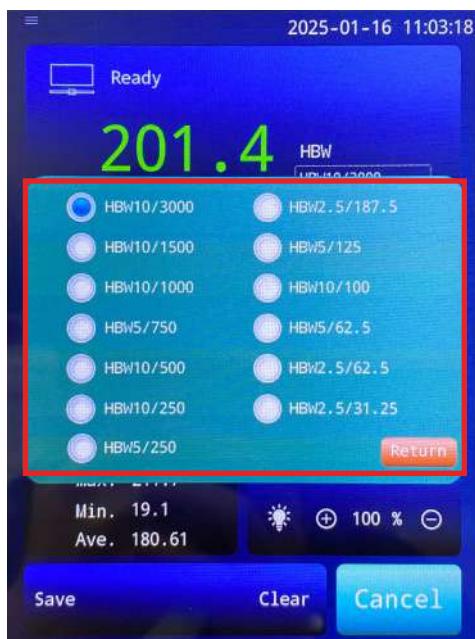
3. Cancel: Press "Cancel" during operation to stop the running process, and the indenter will return to initial state.

4. Function keys: Used for force value calibration, encoder calibration, and language switching.

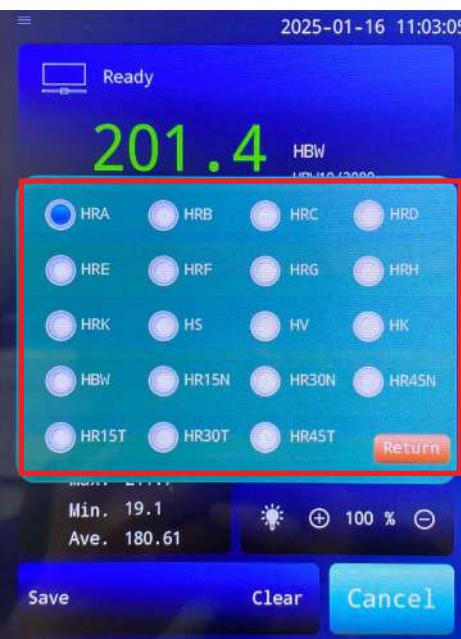
5. Hardness Test Result

6. Dwelling Time Setting

7. Illumination Adjusting



Brinell Hardness Scale Selection



Conversion Scale Selection



Measured Data Input

# Technical Specification

<b>Product Name</b>	Electronic Touch Screen Vision Brinell Hardness Tester
<b>Model</b>	iBrin-3000EV
<b>Data Display&amp;Output</b>	LCD Touch Screen/Computer
<b>Test Force</b>	<b>Kg</b>
	62.5kgf、100kgf、125kgf、187.5kgf、250kgf、500kgf、750kgf、1000kgf、1500kgf、3000kgf
	<b>N</b>
	612.9N, 980.7N, 1226N, 1839N, 2452N, 4903N, 7355N, 9807N, 14710N, 29420N
<b>Test Force Resolution</b>	0.1Kg
<b>Brinell Scale</b>	HBW2.5/31.25、HBW2.5/62.5、HBW2.5/187.5、HBW5/62.5、HBW5/125、HBW5/250、HBW5/750、HBW10/100、HBW10/250、HBW10/500、HBW10/1000、HBW10/1500、HBW10/3000
<b>Test Force Accuracy</b>	62.5 ~ 250Kgf≤1%, 500 ~ 3000Kgf≤0.5%
<b>Reading Microscope</b>	Resolution :0.01 mm (The Minimum Reading Of Microdrum)
<b>Ball Diameter</b>	Φ2.5mm、Φ5mm、Φ10mm
<b>Test Space</b>	Test Height: 280mm Test Throat:150mm
<b>Executive Standard</b>	BSEN 6506, ISO 6506, ASTM E10, GB/T231
<b>Loading Method</b>	Automatic (Loading/Dwell/Unloading)
<b>Test Force Dwelling Time</b>	1-99 S (1 second /step)
<b>Hardness Resolution</b>	0.1 HBW
<b>Hardness Test Range</b>	8-650HBW
<b>Power Supply</b>	220V /2A /50Hz
<b>Dimensions(L*W*H)</b>	Machine: 520*250*950mm Package: 720*530*1150mm
<b>Weight</b>	Net Weight: 164Kg Gross Weight:195kg

# Standard Delivery

Item	Qty	
Machine Mainframe	1 set	
Φ150mmTest Anvil	1 pc	
Φ80mmTest Anvil	1 pc	
Φ80mmV-shape Test Anvil	1 pc	
Φ10mm Hard Alloy Ball Indenter	1 pc	
Φ5mm Hard Alloy Ball Indenter	1 pc	
Φ2.5mm Hard Alloy Ball Indenter	1 pc	
200±50HBW Brinell Hardness Block HB10/3000	1 pc	
100±25HBWBrinell Hardness Block HB10/1000	1 pc	

# Standard Delivery

Item	Qty	
BRM-2Reading Microscope	1 pc	
Power Cord	1 pc	
Accessory Case	1 pc	
Anti-dust Cover	1 pc	
Instruction Manual	1 copy	
Warranty Card	1 copy	
Product Certificate	1 copy	

**Mikrosize®**

# uVision-PB

## Portable Brinell Hardness Testing System



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## Product Features and Application

### Product Features

- Portability design: The system features a compact and exquisite structural design. It is easy to install and has an intuitive operation, fully meeting the convenient usage requirements in mobile scenarios.
- Professional optical system: By precise optical imaging technology, it can clearly present the contour of the Brinell indentation image, ensuring the accuracy of the measurement .
- Intelligent Image Analysis: By integrating three algorithms of shape recognition, brightness analysis, and edge computing, the accuracy of measurement results is significantly enhanced.
- Standard sample part testing supports both manual and automatic measurement: It is equipped with a one - click automatic measurement function, which simplifies the operation process and enables non - professionals to get started quickly. Manual measurement and adjustment are also supported.
- The brightness, contrast, and lighting system are adjustable. Parameters can be saved separately and input according to different sample surfaces.
- Multi - scenario applicability: Compatible with both laboratory - level precision inspection and rapid quality inspection in industrial sites.
- Hardness conversion: Automatically conduct conversions among various hardness scales such as Brinell, Rockwell, and Vickers.
- Real - time display of hardness indentation images, with the ability to store and print the images.
- Automatically record measuring data. Reports can be generated according to user - customized requirements and are supported in multiple formats.

### Product Application

- Industrial Manufacturing and On - site Quality Control  
It is applicable to scenarios such as foundries, forging workshops, and machining factories. It can quickly test the hardness of materials like cast iron, steel, non - ferrous metals, and alloys.
- Laboratory Material Research and Standardized Testing  
It is used in scenarios such as hardness comparison experiments of metal materials and R & D testing of new alloys.
- Inspection of Large - scale Workpieces and Infrastructure  
Particularly suitable for in - situ inspection of large - scale castings and forgings, pipelines, and pressure vessels in scenarios such as power plants and steel mills.



## Product Structure

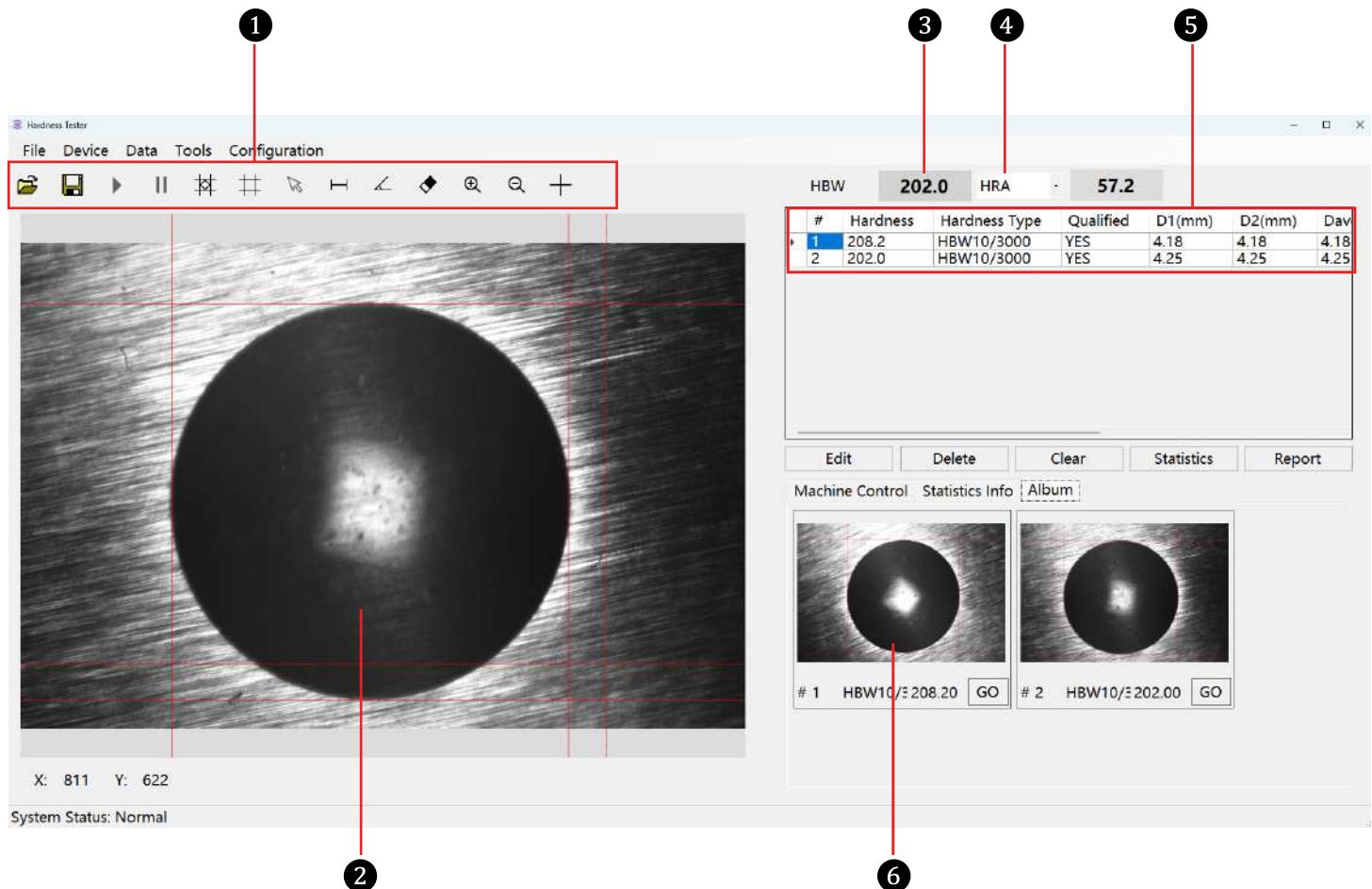


### Measuring Button

1.RS232

2.Measuring Button

# Software Main Interface



1.Toolbar  
5.Data list

2.Indentation  
6.Album pictures

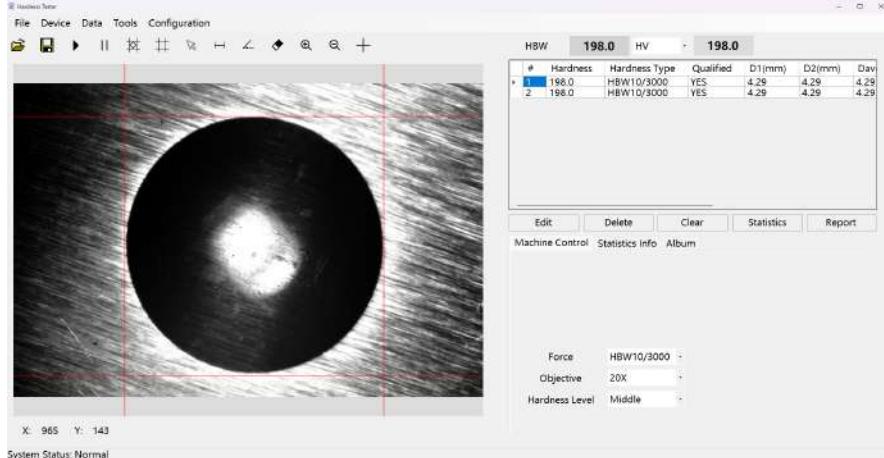
3.Brinell hardness value

4.Conversion scale

## Indentation Measuring



Manual Measuring



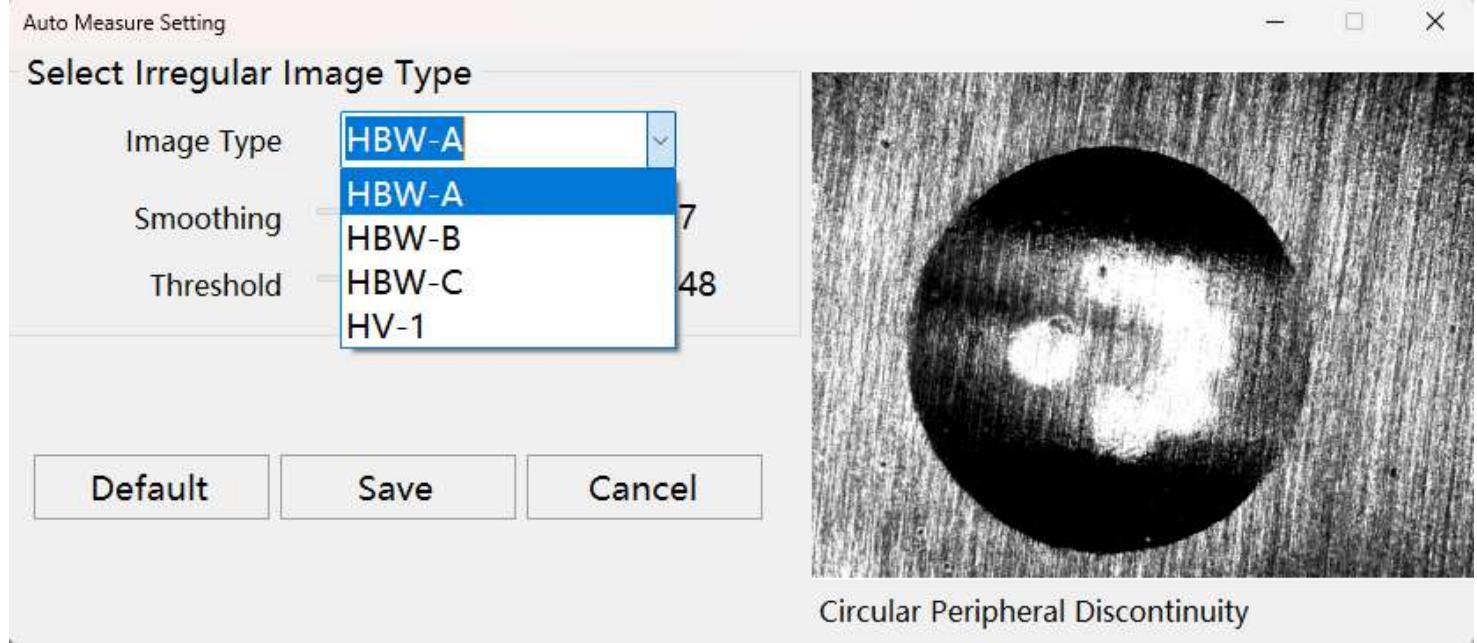
Auto Measuring

Two methods for indentation measurement in this software: automatic measurement and manual measurement.

**Automatic Measurement:** Ensure that the indentation image is clear. Click "Automatic Measurement" on the top, and the measurement results will be automatically displayed on the right side of the software.

**Manual Measurement:** Click "Manual Measurement" on the top. Then, mark the edges of the indentation in the order of left, right, top, and bottom. After that, the measurement results will be shown on the right side of the software.

## Select Image Type



## Indentation Image Type

For automatic measurement, you need to select an appropriate image type that is consistent with the type of the indentation image to be measured.

## Brinell Scale Selection

- HBW1/1
- HBW1/2.5
- HBW1/5
- HBW1/10
- HBW1/30
- HBW2.5/6.25**
- HBW2.5/15.625
- HBW2.5/31.25
- HBW2.5/62.5
- HBW2.5/187.5
- HBW5/25
- HBW5/62.5
- HBW5/125
- HBW5/250
- HBW5/750
- HBW10/100
- HBW10/250
- HBW10/500
- HBW10/1000
- HBW10/1500
- HBW10/3000**

### Brinell Scales

The selection of the brinell scales should be consistent with the scale used in the test.

This software supports most common Brinell hardness scales, with a total of 21 types.



# Conversion Scale

HBW	204.5	HRA	57.5
#	Hardness	Hardness	
1	204.5	HBW	Qualified
		HBW1	D1(mm)
		HRA	D2(mm)
		HRB	Dav(mm)
		HRC	
		HRD	
		HRF	
		HR15N	
		HR30N	
		HR45N	
		HR15T	
		HR30T	
		HR45T	

YES 4.22 4.22 4.22

**Edit** **Delete** **Search** **Statistics** **Report**

## Conversion Scales

This software supports conversion between common Brinell, Rockwell, Vickers, and Knoop scales.



# Sample Information Editing

Sample Info

X

Sample Name

Sample Name

Sample Sn

Sample Sn

Min Value

0

Max Value

800

Inspection Company

Inspection Con

Inspection Date

2025-02-24



Tester

Tester

Reviewer

Reviewer

Confirm

Cancel

## Sample Information

Users can edit the information of the tested samples, including the sample name, hardness range, tester, test date, etc. This facilitates subsequent management and querying.

# Data Processing

Edit Record

X

Index	1	Hardness Type	HBW10/3000
Measure Time	14:33:43	Hardness	208.2
D1(mm)	4.185	Qualified	YES
D2(mm)	4.185	Convert Type	HRA
Davg(mm)	4.185	Convert Value	58.0
Depth(mm)	0		

Confirm

Cancel

Data Editing

Machine Control   **Statistics Info**   Album

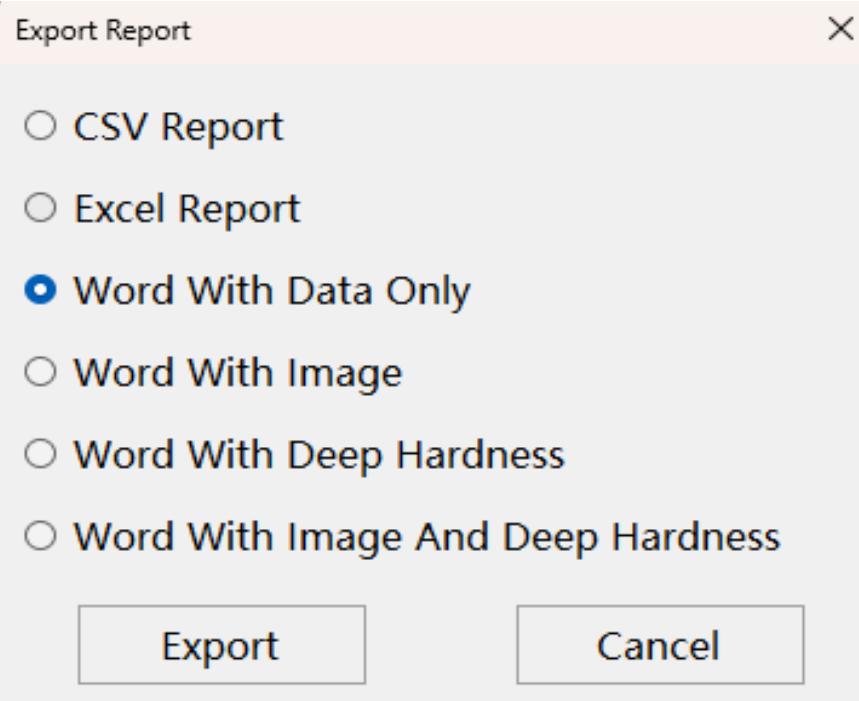
Number	4	Variance	0.20
Min	203.40	StdDev	0.45
Max	204.50	CP	296.30
Average	204.15	CPK	151.22

Data Statistics

Select a specific measurement record to edit and modify the measurement result.

For the results of multiple tests, click the "Statistics Info" button, and the software will calculate the maximum value, minimum value, average value, and standard variance of the data.

# Report Output



Report Format

**Report**

Sample Name	Sample Name	Sample Size	Sample Size
MinValue	0	MaxValue	300
Inspection Company	Inspection Company	Inspection Company	2025/02/24
Total	Total	Reviewed	Reviewed
Force	100M10/2000	Load Time [s]	0

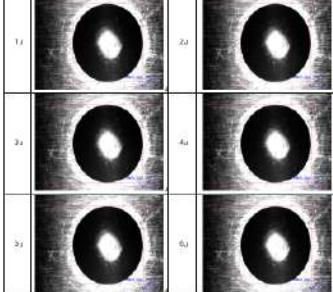
Scanning detail					
ND <sub>0</sub>	NA <sub>0.5</sub>	Min <sub>0</sub>	Avg <sub>0</sub>	Max <sub>0</sub>	SD <sub>0</sub>
6.0	20.500	20.000	20.000	0.46	0.67

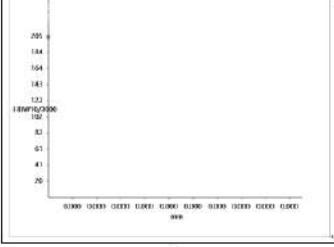
  

Detailed Data							
#	Distance	Distance	Depth	Depth	Concave	Concave	Peak
1	6.22	6.12	6.22	6.00	0.00	0.00	Y
2	4.22	4.22	4.22	3.00	0.00	0.00	Y
3	4.22	4.22	4.22	3.00	0.00	0.00	Y
4	4.22	4.22	4.22	3.00	0.00	0.00	Y
5	4.22	4.22	4.22	3.00	0.00	0.00	Y
6	4.22	4.22	4.22	3.00	0.00	0.00	Y

Depth hardness test		
Concave depth test	Y	0.000





Report

This software supports multiple report export formats, including Word, Excel, and CSV.

Web:www.mikrosize.com

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Email:mikrosize@mikrosize.com

# Report Output

<b>Model</b>	uVision-PB
<b>Application Brinell indenter</b>	1mm/2.5mm/5mm/10mm
<b>Brinell Hardness Scale</b>	HBW1/1、HBW1/2.5、HBW1/5、HBW1/10、HBW1/30、 HBW2.5/6.25、HBW2.5/15.625、HBW2.5/31.25、HBW2.5/62.5、 HBW2.5/187.5、HBW5/25、HBW5/62.5、HBW5/125、HBW5/250、 HBW5/750、HBW10/100、HBW10/250、HBW10/500、HBW10/1000 、HBW10/1500、HBW10/3000
<b>Executive Standards</b>	BSEN 6506、ISO 6506、ASTM E10、GB/T 231
<b>Measuring Range</b>	15.9-650HBW(ASTM E10 Recommended Effective Hardness Value)
<b>Indentation Diameter Range</b>	0.6-6mm
<b>Measurement Resolution</b>	0.0001 mm
<b>Hardness Resolution</b>	0.1 HBW
<b>Digital Imaging</b>	6.3 Mega Pixel Industrial-grade Digital Camera
<b>Measuring Way</b>	Manual And Automatic Measurement (For Standard Samples)
<b>Calibration Method</b>	Standard Hardness Block/length Scale
<b>Support Language</b>	English (Optional Other Languages)
<b>Power Supply</b>	USB Power Supply
<b>Dimension</b>	170x54x54mm
<b>Weight</b>	500g

# Standard Delivery

Item	Qty	
Portable Measuring Head	1 set	
USB Flash Drive (Software Included)	1 pc	
Brinell Hardness Block HB10/3000	1 pc	
Dongle	1 pc	
Instruction Manual	1 copy	
Warranty Card	1 copy	
Product Certificate	1 copy	