

Mikrosize®

MRocky-150/45A

Fully Automatic Full Rockwell Hardness Tester



Video



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Features & Applications

Product Features

- Closed loop system, ready for use upon power-on
- Adopts a novel head-down pressing structure with a fixed stage, eliminating coaxiality errors common in traditional screw types
- Fully automatic operation: loading, dwell time, and unloading of test forces
- High-precision guide rails control precise head movement
- High-definition LCD touch screen, clear display, simple and convenient operation
- High-precision displacement sensor, hardness resolution up to 0.1 HR
- Wide range of test scales: Rockwell, Plastic Rockwell, Superficial Rockwell
- Equipped with an external Bluetooth printer
- Hardness values for all scales can be calibrated
- USB and RS232 interfaces for computer connection

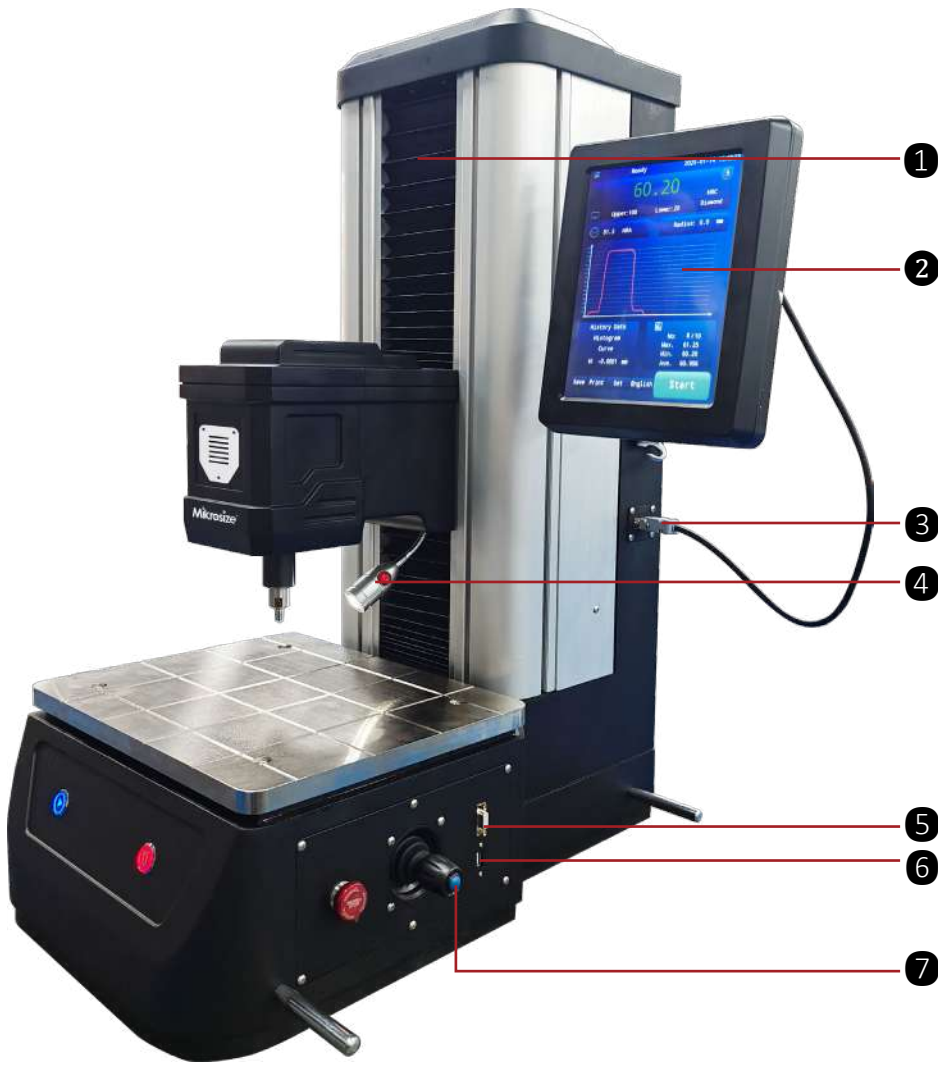


Product Application

- Mechanical Manufacturing
Used to test the hardness of various mechanical components to ensure product quality and performance
- Aerospace
Precisely measures material hardness, providing crucial data support for the design and manufacturing of aerospace vehicles
- Metal Smelting & Processing
Used for hardness testing of raw materials and finished products to evaluate their quality and performance.



Instrument Appearance



1. Guide Rails 2. Display Screen 3. Touch Screen Interface
4. Illumination Lamp 5. RS232 Interface 6. USB Interface 7. Control Joystick



1. Emergency Stop Button 2. Stop Button 3. Start Button 4. Stage
5. Indenter 6. Downward Pressing Head



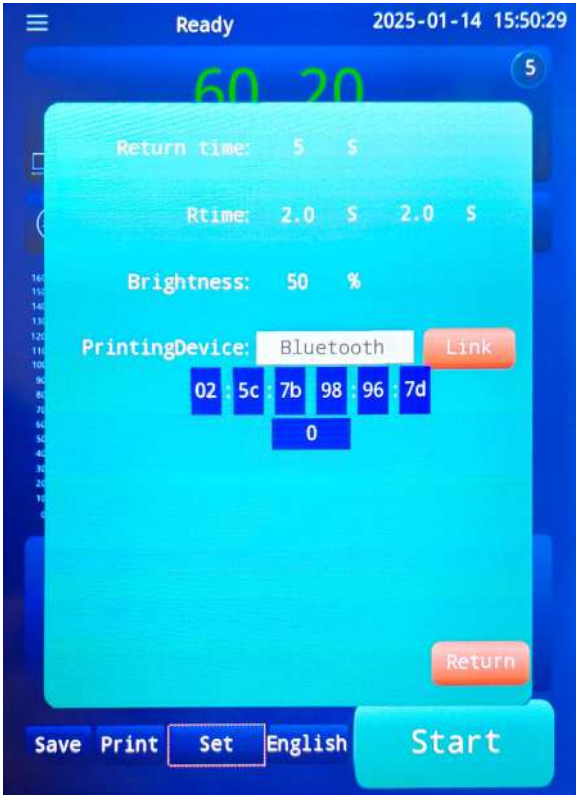
1. Power Switch 2. Power Cord Interface

Detail Showcase

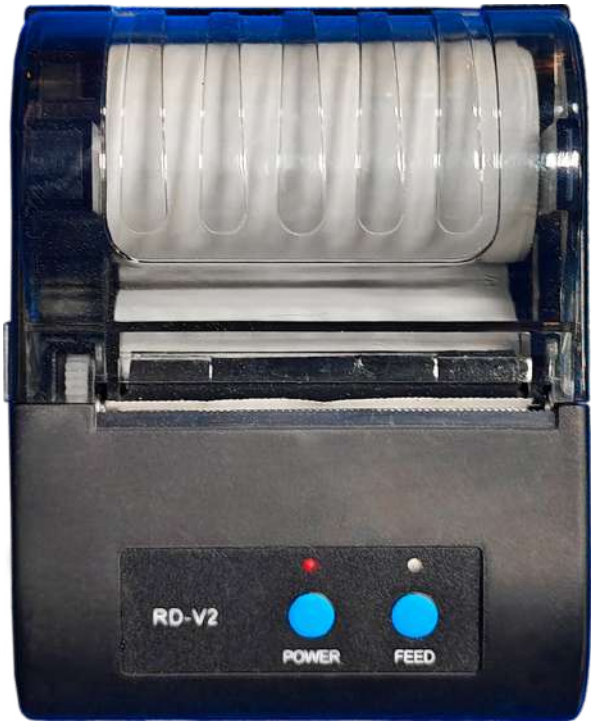


Indenter

This equipment adopts a head-down movable structure, with movement controlled by high-precision guide rails. This method eliminates coaxiality errors generated by traditional lead screws, improves testing accuracy, and enhances the stability of the hardness tester.



Settings



Bluetooth Printer

Settings /Bluetooth Printer

The device has built-in Bluetooth functionality. When paired with a wireless printer, test results can be printed conveniently and promptly.

Functions



Main Interface

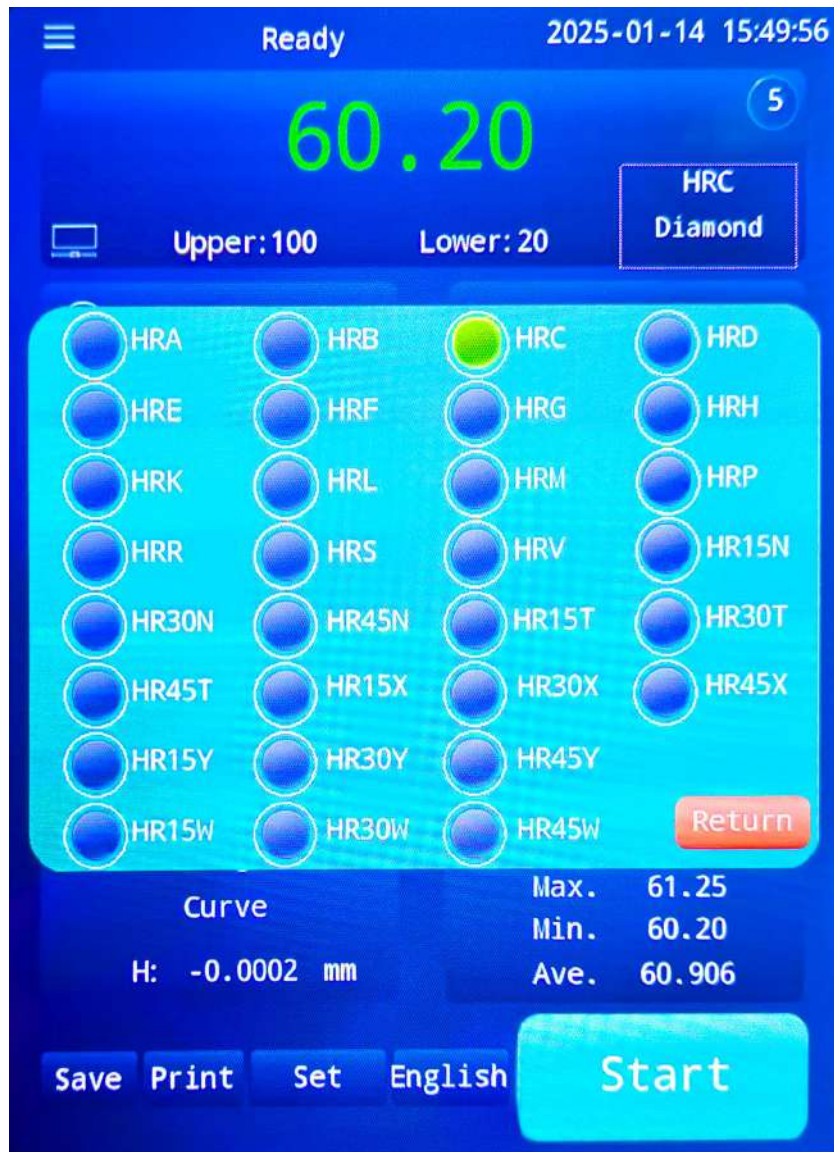
- | | | | |
|-------------------------|----------------|---------------|---------------|
| 1. Test Result | 2. Date & Time | 3. Dwell Time | 4. Test Scale |
| 5. Curvature Correction | 6. Test Data | | |



Main Interface

- | | | | |
|--------------------------|---------------------|-----------------------|----------------|
| 1. Language Switch | 2. Settings Button | 3. Print Button | 4. Save Button |
| 5. Real-time Force Curve | 6. Scale Conversion | 7. Upper/Lower Limits | |

Detail Showcase

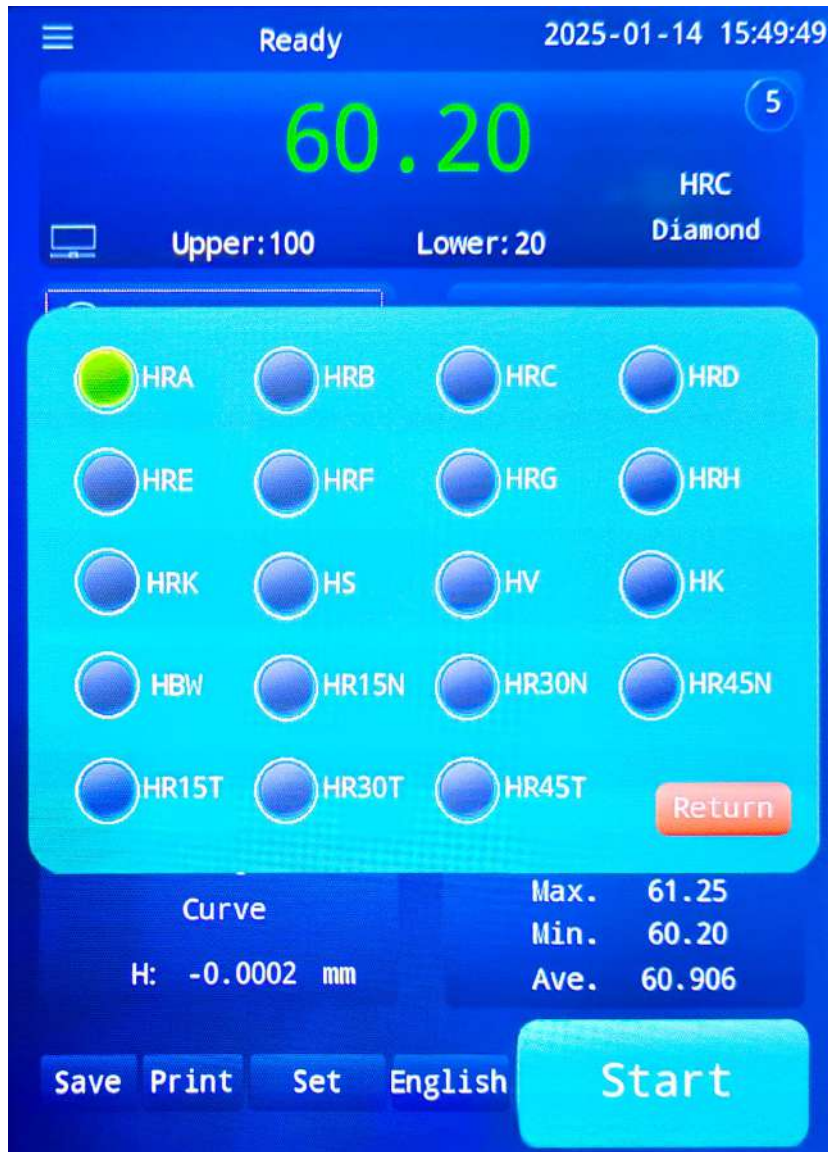


Scale Selection

The device covers standard Rockwell scales, Plastic Rockwell scales, and Superficial Rockwell scales, offering a total of 30 selectable test scales:

HRA、HRB、HRC、HRD、HRE、HRF、HRG、HRH、
HRK、HRL、HRM、HRP、HRR、HRS、HRV、HR15N、
HR30N、HR45N、HR15T、HR30T、HR45T、HR15X、
HR30X、HR45X、HR15Y、HR30Y、HR45Y、HR15W、
HR30W、HR45W

Scale Conversion

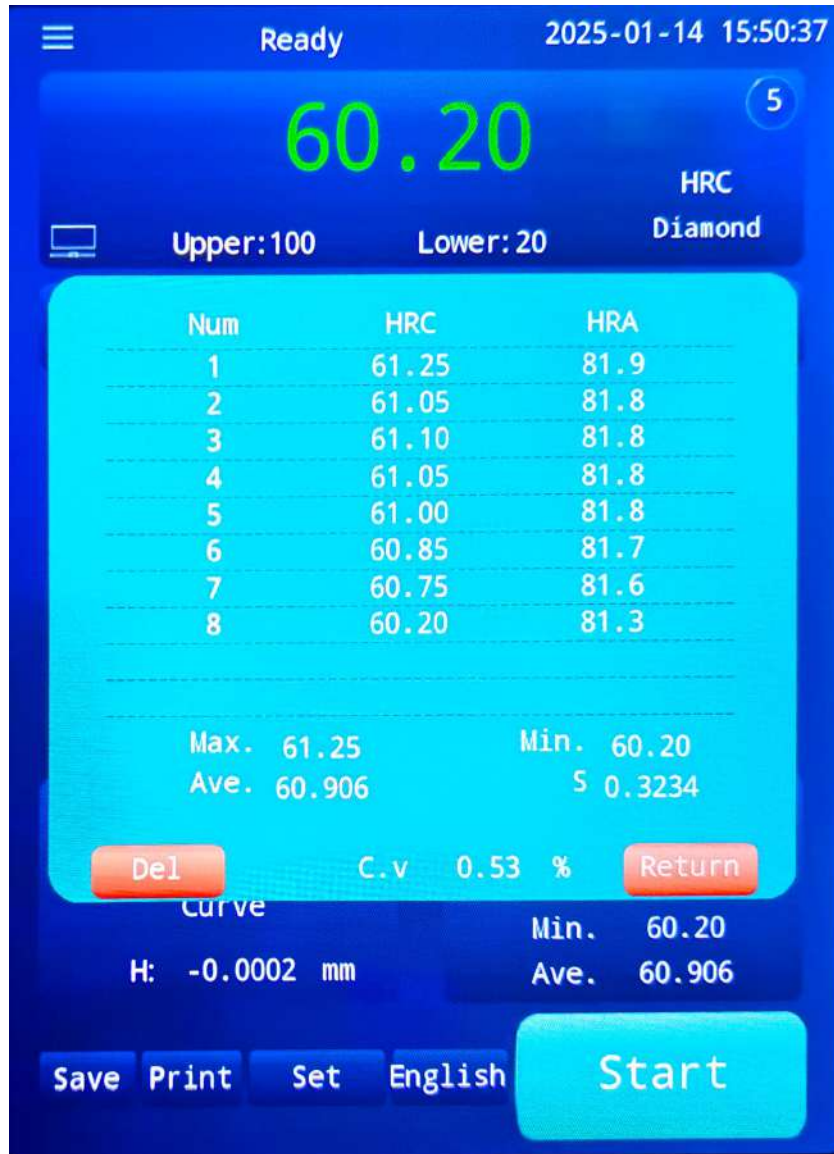


Scale Conversion

After testing, hardness values can be converted to values of other hardness scales. The device supports conversion to 19 common hardness scales, including Vickers hardness, Brinell hardness, Knoop hardness, etc.

HRA、HRB、HRC、HRD、HRE、HRF、HRG、HRH、HRK
、HS、HV、HK、HBW、HR15N、HR30N、HR45N、
HR15T、HR30T、HR45T

Test Data



Test Data

- Up to 10 sets of data can be recorded in a single test session
- Automatically calculates maximum, minimum, and average values.
- Click the Save button after testing to save results to Historical Data

Historical Data



Historical Data

- Search data
- Delete data
- Print data output

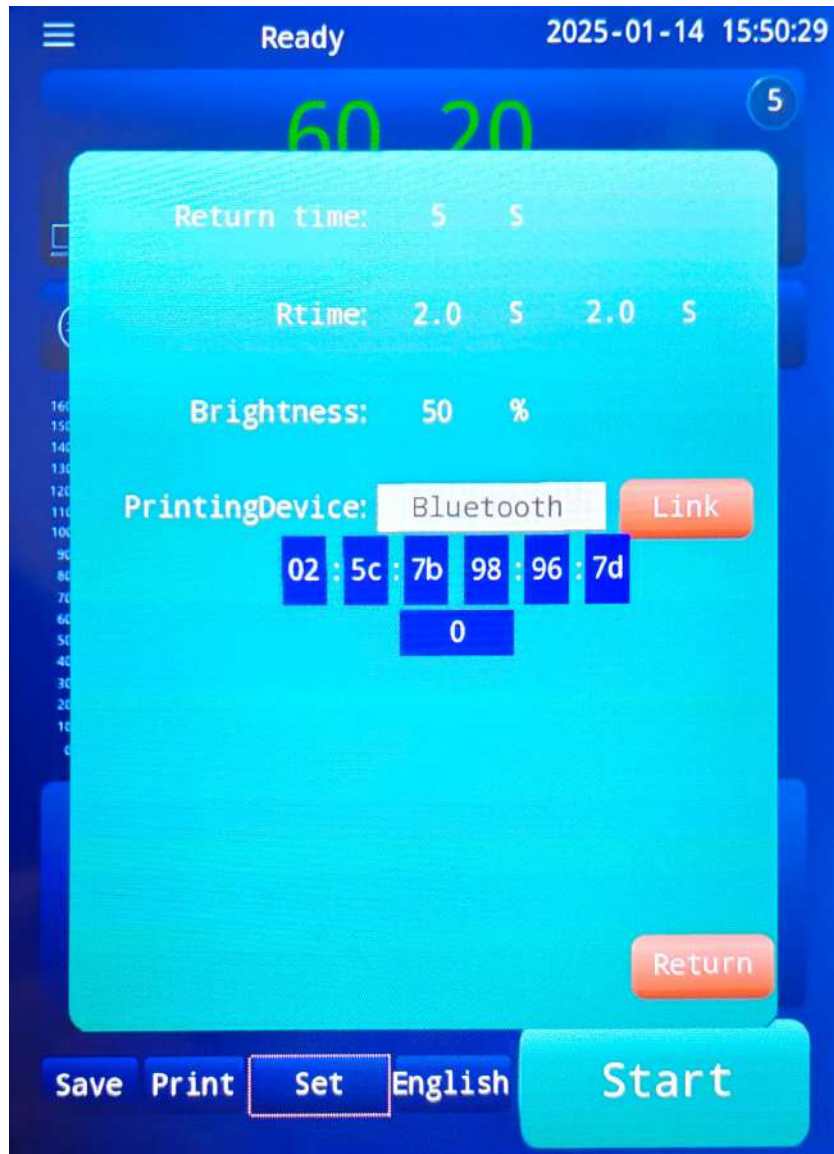
Data Processing



Data Processing

● Test data is processed and presented in the form of bar charts and curve graphs, making results more intuitive.

Settings



Settings

- Adjust dwell time
- Adjust screen brightness
- Connect Bluetooth printer

Calibration

Ready 2025-01-14 15:50:52

60.20

5

HRC
Diamond

Upper: 100 Lower: 20

Hardness: HRC

	High	Median	Low
Standard	100.00	100.00	100.00
Measured	100.00	100.00	100.00

Return

Curve

H: -0.0003 mm

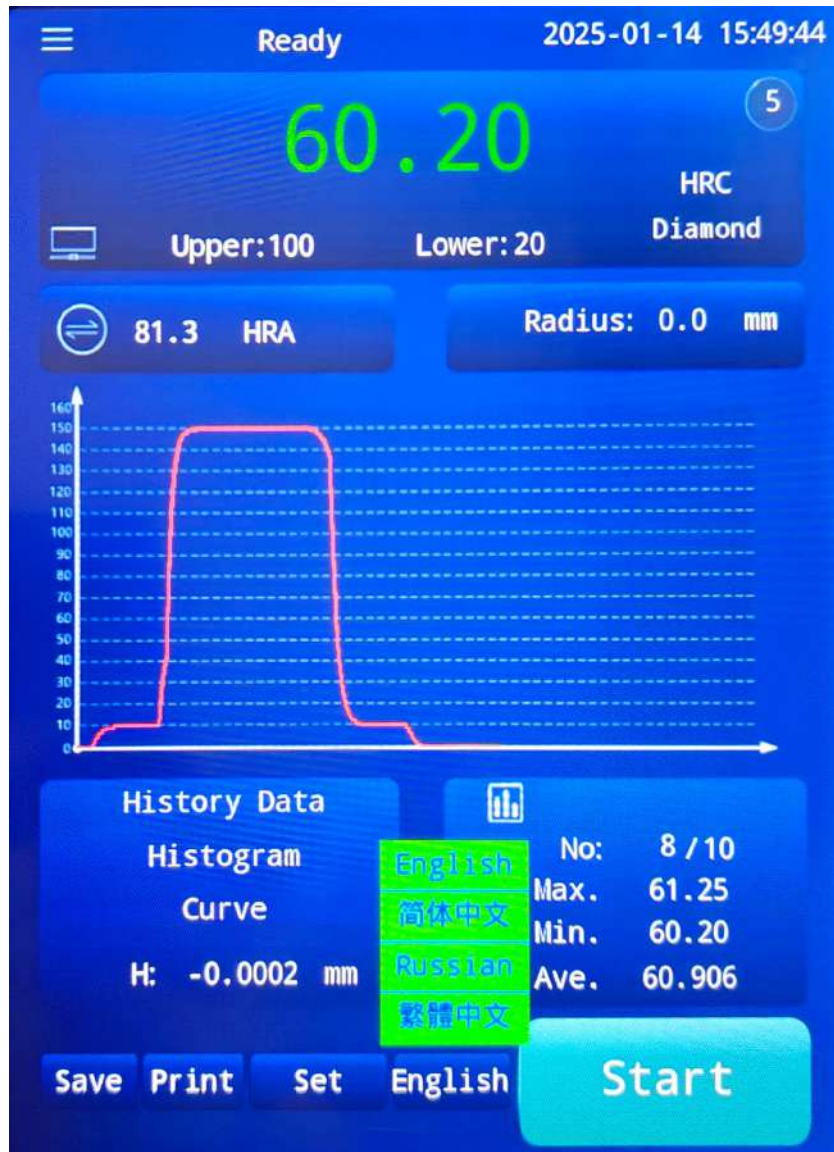
Max.	61.25
Min.	60.20
Ave.	60.906

Save Print Set English Start

Calibration

If test results are inaccurate, the software can be used to calibrate/correct the results.

Language Selection



Language Selection

Supports 4 display languages; other languages can be customized.

Technical Specification

Name	Fully Automatic Rockwell Hardness Tester	
Model	MRocky-150/45A	
Control System	Precision Stepper Motor Control System	
Dwell Time	1~60s	
Initial Test Force	10kgf (98.07N) 3kgf (29.4N)	
Total Test Force	60、100、150kgf (588.4、980.7、1471N)	15、30、45kgf 147.1、294.2、441.3N)
Indenter Specification	Diamond Rockwell Indenter; Φ1.5875mm Ball Indenter	
Test Height	280mm	
Test Throat	170mm	
Measurement Scales	HRA、HRB、HRC、HRD、HRE、HRF、HRG、HRH、 HRK、HRL、HRM、HRP、HRR、HRS、HRV、HR15N、 HR30N、HR45N、HR15T、HR30T、HR45T、HR15X、 HR30X、HR45X、HR15Y、HR30Y、HR45Y、HR15W、 HR30W、HR45W	
Conversion Scales	HRA、HRB、HRC、HRD、HRE、HRF、HRG、HRH、HRK、HS、HV、 HK、HBW、HR15N、HR30N、HR45N、HR15T、HR30T、HR45T	
Hardness Resolution	0.1HR	
Data Output	Bluetooth; RS232 Interface; USB Interface	
Power Supply	AC220V, 50Hz	
Dimensions (LxWxH)	400*855*620mm	
Net Weight	Approx. 180kg	

Standard Delivery

Item	Qty	
Hardness Tester Mainframe	1	
Diamond Rockwell Indenter	1	
Φ1.5875mm Carbide Ball	1	
Indenter	1	
Φ1.588mm Carbide Ball	1	
Φ100mm Flat Test Anvil	1	
90*110mm V-shape Test Anvil	1	
Hardness Block (HRA)	1	

Standard Delivery

Item	Qty	
Hardness Block (HRB)	1	
Hardness Block (HRC)	3	
Hardness Block (HR15N)	1	
Hardness Block (HR30N)	2	
Hardness Block (HR30T)	1	
Bluetooth Printer	1	
Spirit Level	1	
Leveling Screws	4	
65mm65mm Screwdriver	1	
Power Cord	1	
2A Fuse	2	
Anti-dust Cover	1	
User Manual (incl. Certificate, Packing List)	1	



Optional Delivery

Optional Delivery

Carbide Balls

Various Stages

Various Hardness Blocks

Internal Machine Parts

Various Indenters

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