

Touch Screen Digital Universal Hardness Testers



This is a 3-in-1 closed-loop hardness tester that combines Brinell, Rockwell, and Vickers methods without requiring interchangeable weights.

Core Advantages:

- **Load Cell Technology:** Uses a closed-loop load cell system (no physical weights), enabling automatic force correction and high accuracy.
- **8" Touchscreen:** Modern UI for operation, data storage (export to Excel via USB), and password protection.
- **Wide Test Force Range:** Supports 10 different Vickers forces (5–120 kgf), 10 Brinell forces, and standard Rockwell preloads + main loads.
- **Automatic Features:** Hardness conversion (GB/ASTM), Rockwell curvature radius correction, and force compensation.

Applicable Standards:

- **Rockwell:** ISO 6508, ASTM E-18, JIS Z2245, GB/T 230.2
- **Brinell:** ISO 6506, ASTM E10-12, JIS Z2243, GB/T 231.2
- **Vickers:** ISO 6507, ASTM E92, JIS Z2244, GB/T 4340.2

Test Method	Max. Vertical Sample Height
Rockwell	220 mm (8.66")
Vickers	150 mm (5.91")
Brinell	150 mm (5.91")
Horizontal (throat) depth is 200 mm for all methods.	

Specifications

Model	EI-BRV187.5TS
Test Forces	Brinell: 5 – 187.5 kgf Rockwell: 60, 100, 150 kgf (Initial: 10 kgf) Vickers: 5 – 120 kgf
Hardness Ranges	Brinell: 8 – 650 HBW Rockwell: 20 – 100 HR Vickers: 8 – 2900 HV
Indication Accuracy	Brinell: $\pm 2.5\%$ Rockwell: ± 0.1 HR Vickers: ± 2
Repeatability	Brinell: $\leq 3.0\%$ Rockwell: 0.5 HR Vickers: ≤ 2.5
Force Error	$< 0.5\%$
Dwell Time	0 – 60 s
Min. Measuring Unit	0.1 μm
Magnification (Standard)	Eyepiece 15 \times , Objective 2.5 \times (Brinell) / 5 \times (Vickers) \rightarrow Total: 37.5 \times , 75 \times (10 \times , 20 \times Optional)
Rate Voltage	240v 50Hz
Dimension	560 \times 350 \times 800 mm
Weight	Approx. 70kg

Standard Accessories:

Part Name	Qty	Part Name	Qty
15x Eyepiece	1	Brinell Indenter $\varnothing 2.5\text{mm}$, $\varnothing 5\text{mm}$, Carbide Ball	Each 1
Vickers Indenter	1	Rockwell 1.588 Carbide Ball Indenter	1
Rockwell Diamond Indenter	1	Objective Lens 2.5x, 5x	Each 1
Hardness Block	5 pcs	Exterior Lighting	1
Power Line	1	Large, Medium, V-test Sets	Each 1
Sliding Test Sets	1	U disk (with an Operation manual)	1
Fuse 2A	2	Adjust Level Screw	4
Dust Proof Cover	1	Accessories Box	1
Camera	1	Operation Software for Brinell / Rockwell /	1
Computer Set & Printer	1	Vickers	

Main Interface for Brinell

Operator

Sample

Range To

Load(kg)

Dwell Time(S)

Start

D1 D2

HBW

Conversion

Reset **Return** **Calibrate**

Brinell Test Scale

Measurement scale for the Brinell

1/5	2.5/6.25	1/10
2.5/15.625	1/30	2.5/31.25
2.5/62.5	10/100	5/125
2.5/187.5		

Return

Main Interface for Rockwell Test

Operator:

Sample:

Curvature:

Range: To

Hardness type:

Conversion type: Value:

Dwell Time(S):

Hardness value: **Calibration**

Start **Return**

Rockwell Test Scale

Measurement scale for the Rockwell

HRA	HRB	HRC	HRD
HRE	HRF	HRG	HRH
HRK	HRL	HRL	HRP
HRR	HRS	HRV	

Return

Main Interface for Vickers Test



Operator

Sample

Range To

Load(kg)

Dwell Time(S)

Start

D1 D2

HV

Conversion:

Reset **Return** **Calibrate**

Vickers Test Scale (Any 10 Types)



Measurement scale for the Vickers

5	10	20
30	40	50
60	80	100
120		

Return

Brinell, Vickers Testing Calibration



Calibration

Magnification:

Load(kg):

Pulse count: X Y

Hardness value

Save **Calibration**

Return

Rockwell Testing Calibration



Calibration

Scale:

Standard hardness value: Measured:

Low	<input type="text"/>	<input type="text"/>
Medium	<input type="text"/>	<input type="text"/>
High	<input type="text"/>	<input type="text"/>

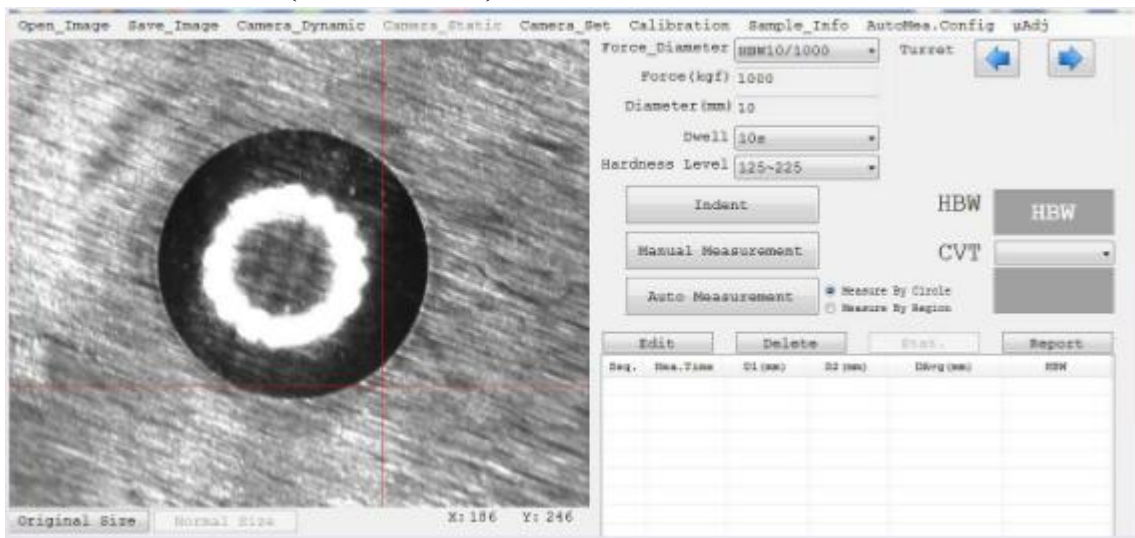
Save **Calibration**

Return

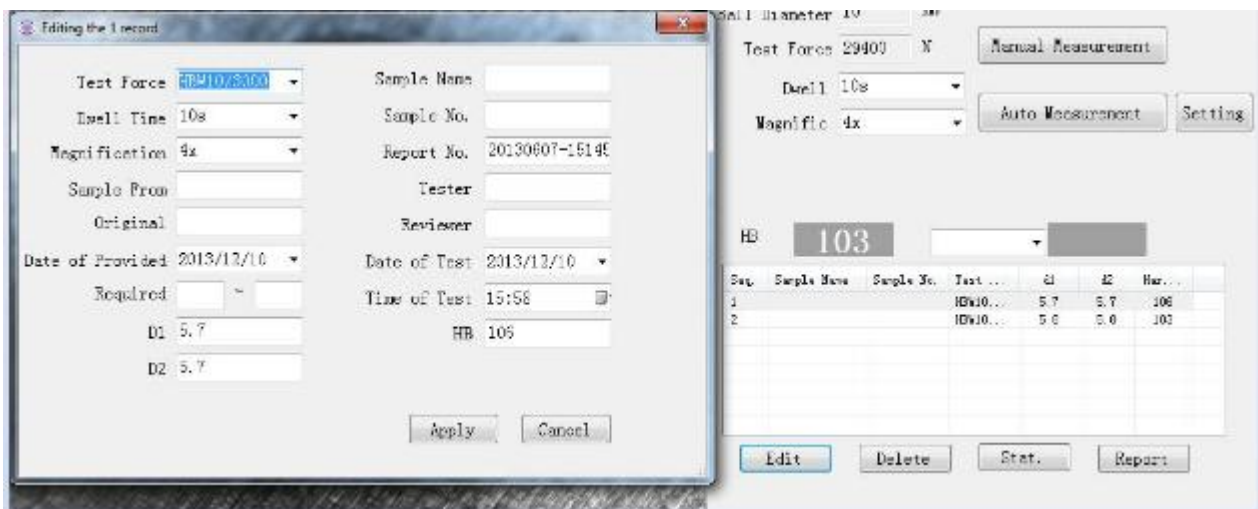
Testing Software:

1. Image with high resolution and indentation measurement by auto or manual.
2. Calibration using micrometer or hardness block, can be calibrated automatically.
3. Hardness converted to other hardness scales according to ASTM standard, alarm when hardness values out of range.
4. Test report scan be customized; all testing data can be saved for long time and easy for historical inquiry.

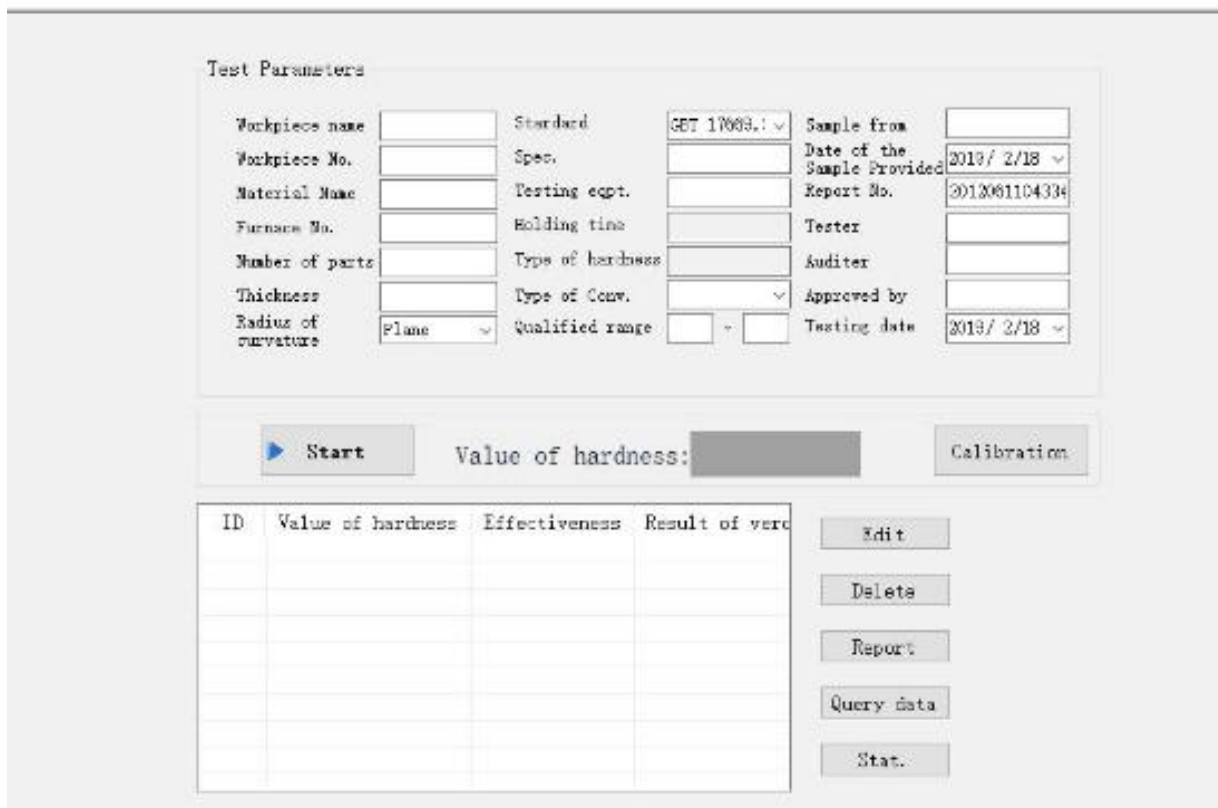
Brinell Software Interface (for reference):



Support Test Result Edits Function:



Rockwell Hardness Test Interface:



Vickers Hardness Test Interface: Support automatic & manual measurement mode and generate test report in word format.

