



BANBROS ENGINEERING PVT. LTD.

The Precision Measurement People

AUTOMATIC TWIN ROCKWELL HARDNESS TESTER

- *VALUE*
- *VERSATILITY*
- *PERFORMANCE*



BRH-150AH



- With Rockwell & Superficial Rockwell hardness scale
- Close loop load cell design, easy installation & operation
- Head move up and down, high test accuracy and repeatability
- Automatic design, press one key get result directly

DESCRIPTION:

BRH-150AH head move version automatic twin Rockwell hardness tester is a most advanced mechatronic product. It is evolved from the traditional Rockwell hardness tester, improving many of the shortcomings of the traditional machine, makes test more precision and easier. It is a most ideal choice for hardness testing of Metallographic testing laboratories, industries and research institutions.

FEATURES:

- Wider hardness scales: Rockwell and superficial Rockwell, suitable to test the hardness of more wider range materials.
- Easy installation and operation: Close loop load cell structure does not need to install dead weights, on touch screen can select test scale force directly, easy installation and operation.
- Higher test accuracy and repeatability: The machine work table is fixed, and the indenter head moves up and down for hardness test. The fixed test stand can eliminate the coaxiality error caused by up and down rotation of the traditional screw, which improves test accuracy and repeatability of the test, and also increases the stability and efficiency of the machine testing work.
- Fully automatic: Press one key, machine will automatically test and display hardness on screen directly.
- Better display resolution: The depth measurement system adopts a high precision displacement sensor, which can obtain 0.1HR resolution of hardness value.
- Quality judgment function: set well limit system will automatically pass/fail (GO/NG) determination of test results. Greatly improved working efficiency.
- Test result can print out by printer.



**APPLICATION:**

Suitable for quenched steel, tempered steel, annealed steel, cold and hard casting, malleable cast iron, hard alloy steel, aluminum alloy, copper alloy, bearing steel etc. Also suitable for surface quenched steel, surface heat treating and chemical treating materials, sheet, zinc layers, chrome layers, tin layers etc.



Inspection Institution



Test Laboratories



Industrial QC control

TECHNICAL SPECIFICATIONS:

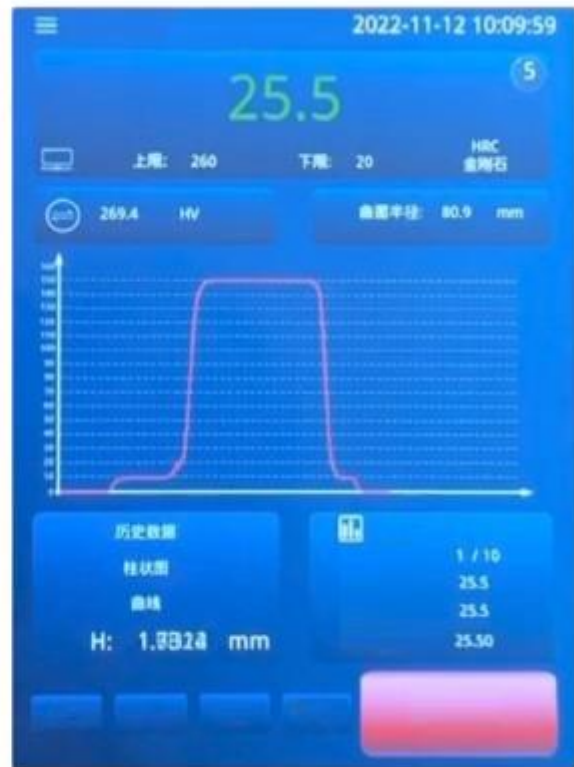
Model No.	BRH-150AH
Rockwell scale	HRA HRB HRC HRD HRE HRF HRG HRH HRK HRL HRM HRP HRR HRS HRV
Superficial Rockwell	HR15N HR30N HR45N HR15T HR30T HR45T HR15W HR30W HR45W HR15X HR30X HR45X HR15Y HR30Y HR45Y
Conversion scale	HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, H15N, H30N, H45N, H15T, H30T, H45T
Preliminary test force	3kgf (29.4N) for superficial Rockwell; 10kgf (98N) for Rockwell
Total test force	15kgf (147.1N) 30kgf (294.2N) 45kgf (441.3N) 60kgf (588.4N) 100kgf (980.7N) 150kgf (1471N)
Indenter	Rockwell diamond indenter, Φ 1.5875mm carbide ball indenter
Indication Resolution	0.1HR
Hardness range	HRA: 20-96, HRB:20-100, HRC:20-70, HRD:40-77, HRE:70-100, HRF:60-100, HRG:30-94, HRH:80-100, HRK:40-100, HRL:50-115, HRM:50-115, HRR:50-115, HR15N:70-94, HR30N:42-86, HR45N:20-77, HR15T:67-93, HR30T:29-82, HR45T:10-72
Hardness data read	Color touch screen
Loading method	Automatic (Load, Dwell, Unload)
Dwell time	1-60S, each step 1 second
Data output	Bluetooth printer, RS232 port, USB port
Test space	Maximum height: 280mm; Maximum throat depth:170mm
Machine Size / N.W	700*500*910mm (L x W x H); 220kg
Power source	AC90-240V, 50-60Hz
Executive standard	GB/T230.2 , BSEN 6508, ASTM E18 , ISO 6508 , JIG112

**STANDARD ACCESSORY:**

Name	Q'ty	Name	Q'ty
Diamond indenter	1	1.5875mm diameter hard alloy steel ball indenter	1
Standard hardness block	5	Testing table	1
1.5875mm ball	5	V-shaped testing table	1
Dust-proof cover	1	Accessory case	1
Manual Book	1	Certificate	1

HARDNESS SCALE, FORCE, INDENTER RELATION OF ROCKWELL SCALES:

Scale	Indenter	Preliminary test force (N)	Total test force (N)	Applications
A	Diamond indenter coning angle 120° 0.2mm radius of top sphere	98	588	Horniness alloy, cementite steel
D			980	Thin steel, quenched case
C			1471	Quenched steel, thermal refined steel, cast steel
F	588		Anneal copper alloy, thin soft steel	
B	Diameter of steel Ball 1.588mm (1/16 inch)		980	Soft steel, aluminum alloy, copper alloy, casting
G			1471	Pearliest iron, copper, nickel, zinc, nickel alloy
H			588	annealed copper alloy
E	Diameter of steel Ball 3.175mm (1/8 inch)		980	Aluminum and aluminium alloy
K			1471	Non-ferrous metals, hard plastics
L			588.4	Hard plastics, hard rubbers, aluminum, tin, copper, mild steel, synthetic resin and friction materials.
M	980.7			
P	1471			
R	588.4			
S	980.7			
V	Ball Indenter ϕ 12.7mm (1/2 inch)	1471		



HARDNESS SCALE, FORCE, INDENTER RELATION OF SUPERFICIAL ROCKWELL SCALES:

Scale	Indenter	Preliminary test force (N)	Total test force (N)	Applications
15N	Diamond Indenter	29.42 N (3kg)	147.1(15)	Hard alloy steel, nitride steel, carburized steel, various heavy steel plate, etc.
30N			294.2(30)	Surface-quenched steel, carburized steel, knife, thin steel plate, etc.
45N			441.3(45)	Quenched steel, tempered steel, hard cast iron and edge of parts, etc.
15T	Ball Indenter φ 1.5875mm (1/16 inch)		147.1(15)	Annealed copper alloy, mild steel sheet, brass, bronze plate, etc.
30T			294.2(30)	Mild steel sheet, aluminium alloy, copper alloy, brass and bronze, malleable cast iron
45T			441.3(45)	Pearlite iron, copper –nickel alloy and zinc-nickel alloy plate, etc.

* Due to continues product development, product image & Specifications are subject to change.

* Customization can be done as per user requirement.