

METROLOGY®



*Brinell Rockwell Vickers
Hardness Tester (Manual)*



*Brinell Rockwell Vickers
Hardness Tester (Electric)*



Brinell Hardness Tester (Electronic)

Brinell Rockwell Vickers Hardness Tester (Electric)

【BRV-9000E】



Innovation Design R&D
Patented Technology Award



Test Structure Design



Precision Cast Iron Body



Assembly & Inspection



Electric universal hardness tester has stable and reliable performance, able to meet Rockwell, small load Brinell and Vickers hardness test requirement, it's convenient for the user to do hardness testing of a variety of materials at the same time, can avoid the artificial error of measurement effectively, it's a economical and practical multifunctional equipment.

Main function and features:

1. Leading variable load structure design, can easily switch test force, high test precision, good repeatability.
2. The dial reads the Rockwell hardness value directly, indicator responses sensitively, show the hardness value accurately, It indicates the Brinell and Vickers hardness value by measuring microscope.
3. To compare with Optical type, this machine optimizes the inner physical mechanic structure, high accuracy, stable function, it is convenient to maintain.
4. The shell is one step casting molding with special foundry process, stable structure and no deformation, can work under relatively harsh environment.
5. Pure white car painting with a classy look, have scratch resistance ability, it's still brightness used for years.

Brinell Rockwell Vickers Hardness Tester (Digital)

【BRV-9000D】



Test Structure Design



Precision Cast Iron Body



Assembly & Inspection



**Innovation Design R&D
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**Sophisticated Sensors
Microcomputer Control System**



**Digital Display Encoder
Data Computing System**

Digital universal hardness tester has high degree of automation, stable and reliable performance, equipped with sophisticated sensors, test is more accurate; 5.6 inch industry screen provide comprehensive data for quality control, through hardness transmission software export test data into the computer conveniently, easy to long term preservation.

Main function and features:

1. Able to meet Rockwell and small load Brinell and Vickers hardness test requirements, it's convenient for user to test a variety of materials at the same time.
2. Equipped with sophisticated sensors, test results are more accurate, the leading variable load structure design, can easily switch test force, high test precision, good repeatability.
3. The main components adopt brand such as American 3M, Allegro, Japan Omron and NKK, to ensure the equipment running stably for a long time.
4. Equipped with digital display micrometer eyepiece and data computing systems accurate to 0.01 um, only gently touch, can directly show the Brinell or Vickers hardness value.
5. It is automatic to test when the working platform lifting up to some height, then indicate Rockwell hardness value and various testing data directly.
6. Both Chinese and English operation interface are simple and intuitive, can set the test method quickly, the control system is more stable after upgraded.
7. The industry LCD screen can be visual display hardness value, hardness unit, conversion hardness, testing force, indenter type, the required minimum thickness, load time, measurement times, and the test process is intuitive and clear, built-in printer can print out measured times, hardness value, average, maximum and minimum values, range for the customer to archive.
8. Optional data transfer software, through RS232 interface will transfer host measurement data to the computer to edit and save.
9. The shell is one piece casting molding with special foundry process, stable structure and no deformation, can work under relatively harsh environment.
10. Pure white car painting with a classy look, have scratch resistance ability, it's still brightness used for years.

Brinell Rockwell Vickers Hardness Tester

- Main Uses:**
1. Rockwell : Chilled steel, quenched and tempered steel, annealing steel, bearing steel, strip steel, hardened steel sheet, hard alloy, etc.
 2. Brinell : Cast iron, nonferrous metal, especially for soft metal, such as pure aluminum, lead, tin, etc.
 3. Vickers : Carburizing, nitriding and decarburization layer, the surface hardening layer, electric plating and coating.

Technical parameters:

Model	BRV-9000E	BRV-9000D
Loading method	Full automatic (load, dwell, unload)	Full automatic (load, dwell, unload)
Dwell time	1~60 S	1~99S
Brinell scale Test force	HBW2.5/31.25, HBW2.5/62.5, HBW5/62.5, HBW2.5/187.5	
Rockwell scale Test force	HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HRL, HRM, HRR	
Vickers scale Test force	HV30, HV60, HV100	
Conversion scale	HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T	
Initial test force	10Kg(98.0N)	
Test force	30Kg(294.2N), 31.25Kg(306.5N), 60Kg(588N), 62.5Kg(612.9N), 100Kg(980N), 150Kg(1471N), 187.5Kg(1839N); Test error $\pm 1.0\%$	
LCD Screen size	none	118x99mm
Resolution ratio	0.5HR	0.1HR
Amplification of microscope	37.5X, 75X	
Hardness value range	20-88HRA, 20-100HRB, 20-70HRC, 8-650HB, 8-3000HV	
Hardness value read	Rockwell: Dial, Brinell and Vickers: look up table	Big digital LCD
Specimen maximum height allowed	Rockwell: 170mm Brinell & Vickers: 140mm (Throat depth:130mm)	
size and weight	Instrument : 460×160×660mm (L×W×H), 85kg Package: 625x430x900mm (LXWXH), 100kg	
Power supply	AC220V + 5%, 50~60 Hz AC110V available	
Data output	none	Built-in printer, RS-232 interface (Export data to the computer for long time preservation)
Executive standard	ASTM E18, ISO 6508, JJG112, JJG150, JIS B-7734, GB/T230.2, GB/T231.2, GB/T4340.2	
Standard accessories	Hardness tester ; 15x reading microscope ; 2.5x , 5x object lens ; Rockwell diamond indenter ; Vickers diamond indenter ; $\Phi 1.588\text{mm}, \Phi 2.5\text{mm}, \Phi 5\text{mm}$, hard alloy ball indenter ; large, medium, "V" shape, and slide test platform ; accessory box ; dust-proof cover ; power cable ; manual instruction ; 5 pieces $\Phi 1.588\text{mm}$ steel ball ; hardness block	
Optional accessories	Data transmission software, hardness measurement software, computer, printer, standard hardness block, standard indenter	

Brinell Hardness Tester (Electronic)

【BHT-3000E】



Test Structure Design



Precision Cast Iron Body



Assembly & Inspection



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Sophisticated Sensors
Microcomputer Control System

Electronic Brinell hardness tester remove the original weight loaded, adopt closed loop sensor control technology, higher accuracy and repeatability, stable performance, the machine appearance is beautiful, has a high performance, are widely used in the factory workshop and laboratory.

Main features:

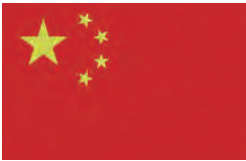
1. Equipped with sophisticated sensors and a microcomputer control system, dynamic force value fluctuation is less than 1/1000, test results are more accurate.
2. It possesses the 10 grades test force, it can test 10 Brinell scales, with wider test range.
3. Equipped with high performance of servo motor which automatically load/unloading, it cause the less noise when do test.
4. The outer shell of machine is formed of special founding unibody cast technology, stable structure, it is not easy to be out of shape, can work under relatively harsh environment.
5. With pure white car painting with a classy look, have scratch resistance ability, it's still brightness used for years.
6. This machine can connect to Brinell image software, improving the efficiency.

Brinell Hardness Tester (Digital)

【BHT-3000D】



Test Structure Design



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Sophisticated Sensors
Microcomputer Control System



Digital Display Encoder
Data Computing System

Digital Brinell hardness tester adopts imported components ensure equipment running more stable and test result is more accurate; powerful data measurement control system accompanying with 5.6 inch LCD screen function is more comprehensive, this machine is simple and easy to operate, the appearance is high end, the ideal choice for high requirement client.

Main function and features:

1. Equipped with Japan Omron encoder digital display micrometer eyepiece and precise data calculating system, only gently touch can directly show the hardness value.
2. Equipped with sophisticated sensors and a microcomputer control system, dynamic force value fluctuation is less than 1/1000, test results are more accurate.
3. The main components adopt brand such as American 3M, Allegro, Japan Omron and NKK, to ensure the equipment running stably for a long time.
4. Equipped with high performance of servo motor which automatically load/unloading, it cause the less noise when testing.
5. The optical system imaging is more clearer , brightness is adjustable, comfortable vision, it's not easy to fatigue for long time operation.
6. Input the indentation diameter, hardness value is displayed directly, and can display conversion hardness value at the same time, avoid the inconvenience of looking up table.
7. The industry LCD screen can be visual display hardness value, hardness unit, conversion hardness, testing force, indenter type, the required minimum thickness, load time, measurement times, and the test process is intuitive and clear, built-in printer can print out measured times, hardness value, average, maximum and minimum values, range for the customer to archive.
8. Optional data transmission software, through RS232 interface will transfer host measurement data to the computer to edit and save.
9. The shell is one step casting molding with special foundry process, stable structure and no deformation, can work under relatively harsh environment.
10. Pure white car painting with a classy look, have scratch resistance ability, it's still brightness used for years.

Brinell Rockwell Vickers Hardness Tester

Brinell Hardness Tester (Electronic) 【BHT-3000E】

Brinell Hardness Tester (Digital) 【BHT-3000D】

Main application:

1. Brinell hardness with huge test force, the indentation is large, which adapts to test the big size grain metal, reflecting the combination property.
2. Cast iron, steel, ferrous metal especially for rather soft metal, such as pure aluminum, lead, tin etc.

Technical parameters:

Model	BHT-3000E	BHT-3000D
Brinell scale	HBW2.5/62.5,HBW2.5/187.5,HBW5/125,HBW5/750,HBW10/100,HBW10/250,HBW10/500,HBW10/1000,HBW10/1500,HBW10/3000	
Test force	62.5kgf(612.9N),100kgf (980.7N),125kgf (1226N),187.5kgf (1839N),250kgf (2452N),500kgf (4903N),750kgf (7355N),1000kgf (8907N),1500kgf (14710N),3000kgf (29420N)	
LCD Screen size	none	118x99mm
Minimum measuring unit	0.005mm	0.00125mm
Measuring range	8~650HBW	
Hardness value read	Check table	Digital LCD
Hardness range	8-650HBW	
Total amplification	20X	
Load method	Automatic(load, dwell, unload)	
Dwell time	1-99S (each step 1 s)	
Max. height allowed	220mm	
Throat depth	120mm	
Instrument size and weight	530x187x758mm (L×W×H)	135kg
Package size and weight	625x430x950mm (Lx W x H)	149kg
Power supply	AC220V + 5%, 50~60 Hz AC110V available	
Executive standard	ASTM E10,ISO 6506,JJG150,GB/T231.2 inspection rules	
Standard accessories	Hardness tester; 20X measuring objective;Φ2.5,Φ5,Φ10mm harden alloy indenter ; big, medium and “V” test table; power cable ; accessory box ;dust-proof cover ; manual instruction; 2 pieces Standard hardness block	
Optional accessories	Hardness measurement software (HB-CCD-B) ; computer; printer; standard indenter; standard block.	

Brinell Measuring Software

【HB-CCD-B】



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This system include the electronic or digital Brinell hardness tester and Brinell measurement software, hardness indentation could be fast read to the computer by portable microscope; only needed to use keyboards and mouse, after the software automatically calculates that can complete the test requirements, can improves working efficiency, it is a perfect solution to test hardness value.

Main functions and features of software:

1. Standard configuration: BRINELL hardness measurement software, dongle, HD CCD, USB data transmission line, computer equipment (optinal)
2. Image analysis software can be customized for kinds of functions, completed, handy operation and meet most customers' demands.
3. It can enlarge the indentation image measurement, and can be amplified again for diagonal part to avoid manual error.
4. It can automatic to identify the indentation image and measure the indentation diameter for bright and clear sample surface.
5. Real time display the indentation diameter, hardness value, indentation depth, material strength, conversion hardness value and etc.
6. It possesses the unique mark positioning function, testing the positioned point hardness value.
7. It can be adjusted the color, gray, contrast ratio, lightness of the image.
8. Attached with function of indentation tangency fine tuning, length measurement and angle measurement etc..
9. It possesses the function of test result statistical analysis, automatic generation and export for the format of Word, and Excel of hardness measurement analysis report, and save the indentation image, print etc..
10. Support WINXP,WIN7,WIN10, 32 & 64 bit operation system.