

# ROCKWELL HARDNESS TESTER



## MR-150A ROCKWELL HARDNESS TESTER

### Specifications:

- Measuring range: 20-88HRA, 20-100HRB, 20-70HRC
- Test force: 588.4, 980.7, 1471N (60,100,150kgf)
- Max. height of test piece: 170mm
- Depth of throat: 135mm
- Dimensions: 466 x 238 x 630mm
- Weight: approx. 65kg

Application: This tester is designed for use in measuring the Rockwell hardness of hard alloys, quenched and unquenched steels. It is a desired instrument for determining the hardness in the factories and scientific research institute and laboratories of college etc.



## MR500 LOAD ADJUSTABLE ROCKWELL HARDNESS TESTER

MR-500 is a kind of newly designed mechanical type testing apparatus with good rigidity structure, accurate indicating value and convenient operation and maintenance. It can be used to measure Rockwell hardness value for carbide, quenched steels, cement steel, aluminum alloys and forging cast iron, and widely used in the mining & industrial enterprises, scientific research institute and laboratories of college etc.

### Specifications

- Measuring range: 20-88HRA, 20-100HRB, 20-70HRC
- Test force: 588.4, 980.7, 1471N (60,100,150kgf)
- Max. height of test piece: 170mm
- Depth of throat: 135mm
- Dimensions: 466 x 238 x 630mm
- Weight: approx. 65kg
- Mode of reading the result: Dial gauge.
- Dim (L x W x H): 466mm x 250mm x 618mm
- Net weight: approximately 80kg



## MRD-150 ROCKWELL MOTOR-DRIVEN HARDNESS TESTER

### Specifications

- Measuring range: 20-88HRA, 20-100HRB, 20-70HRC
- Test force: 588.4, 980.7, 1471N (60,100,150kgf)
- Max. height of test piece: 170mm
- Depth of throat: 130mm
- Min. scale value: 0.5H R
- Power supply: 220V AC or 110V AC, 50/60Hz
- Dimensions: 500 x 250 x 700mm
- Weight: approx. 75kg



# BRINELL HARDNESS TESTER

## MB-3000B BRINELL HARDNESS TESTER

### Specifications

Measuring range: 8-450HBS, 8-650HBW  
 Test force: 1.839, 2.452, 7.355, 9.807, 29.42KN (187.5, 250, 750, 1000&3000kgf)  
 Max. height of test piece: 230mm  
 Depth of throat: 120mm  
 Power supply: 220V AC / 110V AC, 50/60Hz  
 Dimensions(L x W x H): 700mm x 268mm x 842mm  
 Weight: approx. 210kg



## MB600 BRINELL HARDNESS TESTER

Determining the Brinell hardness of unquenched steels, cast iron, non-ferrous metals and soft bearing alloys etc.  
 High testing precision, extensive testing range, automatic load system

Standards: ASTM E-10, ISO6506.2

### Technical specifications

Test force 1839N (187.5kgf), 2452N (250kgf), 7355N (750kgf), 9807N (1000kgf), 29420N (3000kgf)  
 Indenter ball diameter 2.5mm, 5mm and 10mm  
 Test force dwell time 6-99s adjustable  
 Testing range 8-650HBW  
 Horizontal testing space Max. 230mm (9")  
 Vertical testing space Max. 120mm (4.7")

## MB3000C AUTOMATIC ELECTRONIC BRINELL HARDNESS TESTER

MB3000C is a kind of newly designed electronic automated type testing apparatus with good rigidity structure, accurate indicating value and convenient operation and maintenance. It can be used to measure Brinell hardness value for quenched steels, cement steel, aluminum alloys and forging cast iron, and widely used in the mining & industrial enterprises, scientific research institute and laboratories of college etc with special features:

- . Automatic protection activated when overloading and overpositioning occur.
- . Quick and convenient operating functions.
- . There are no weights in this tester, test force is applied by electrical power.

### Specifications :

Measuring range: 4-450HBS, 4-650HBW  
 Test force: 612.9, 980.7, 1225.9, 1838.8, 2451.8, 4903.5, 7355.3, 9807, 14710.5, 29421 N (62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf)  
 Max. height of test piece: 240mm  
 Depth of throat: 180mm



# COMBINED HARDNESS TESTERS

## HBRV-187.5 Brinell Rockwell Vickers Hardness Tester

### Specifications

Measuring range: 4-450HBS, 20-88HRA, 20-100HRB, 20-70HRC, 200-1000HV

Test force: 294.2, 306.5, 588.4, 612.9, 980.7, 1471, 1839N (30, 31.25, 60, 62.5, 100, 150, 187.5kgf)

Max. height of test piece: 200mm

Depth of throat: 160mm

Power supply: 220V AC

Dimensions: 480 x 250 x 760mm

Weight: approx. 120kg

Application: This tester is used for determining the Brinell, Rockwell and Vickers hardness of ferrous, non-ferrous metals and hard alloys. It can be applied in the factories, scientific research institutes, laboratories of institutes and colleges.



## MD9-45 Superficial Rockwell & Vickers Optical Hardness Tester

### Specifications

Preliminary test force: 29.4N

Total test force (N):147,294,441

Magnification of Microscope: 75 150

Max. Height of specimens (mm):180

Measure Superficial Rockwell hardness test (mm):200

Measure Vickers hardness test: 100

Distance from the Indenter's center to OuterWall: 200mm

Machine Size (DXWXH)(mm): 560 × 260 × 750

Power Supply: AC220V/50HZ

Weight (kg):85

Application: It serves to measure the hardness of ferrous, non-ferrous metals, hard metals, carburized or nitride layers, and other chemical treating layers. It is also used to for the hardness test of thin pieces.

## MBRVU-187.5 Brinell Rockwell & Vickers Optical Hardness Tester

### Specifications

Preliminary test force: 98

Total test force(N):588, 980, 1171

Brinell hardness test (N):306, 613, 1839

Vickers hardness test (N):294,588,980

Magnification of Microscope: 37.5 75

Max. height of specimens(mm):180

Distance from Indenter's center to OuterWall: 200mm

Machine Size (DXWXH) (mm): 560 × 260 × 760

Power Supply: AC220V/50HZ

Weight (kg):90

Application: It serves the purpose of measuring the hardness of ferrous, non-ferrous metals, hard metals, carburized layers and chemical treating layers.



# HV-5, 10, 50 VICKERS HARDNESS TESTER

## HVS-5, 10, 50 DIGITAL VICKERS HARDNESS TESTER



**Application:** These series testers are widely used in the factories, scientific research institutes, labs of colleges and universities for determining the Vickers hardness of ferrous and non-ferrous metals, hard alloys, carburized and nitrided layers.

### Specifications:

Model	HV-5	HVS-5	HV-10	HVS-10	HV-50	HVS-50
Test Load	N (kgf)		N (kgf)		N (kgf)	
	2.94 (0.3)		2.94 (0.3)		9.8 (1.0)	
	4.9 (0.5)		4.9 (0.5)		49 (5.0)	
	9.8 (1.0)		9.8 (1.0)		98 (10.0)	
	19.6 (2.0)		29.4 (3.0)		196 (20.0)	
	29.4 (3.0)		49 (5.0)		294 (30.0)	
	49 (5.0)		98 (10.0)		490 (50.0)	
Loading mechanism	Automatic loading and releasing method					
Loading applying speed	0.16-0.19 mm/sec					
Dwell time	5-60 sec					
Magnification of Microscope	For measurement :250 (objective 25 x Eyepiece 10)				For measurement:100 Objective 10 x Eyepiece 10	
	For observation: x 100					
Max. measuring length	0.25 mm		0.25mm		0.65mm	
Min. Measuring unit	0.4 μ m	0.05 μ m	0.4 μ m	0.05 μ m	1 μ m	0.125 μ m
Max. height of specimen	160mm					
Max. depth of specimen	135mm					
Test range	8HV <sub>0.3</sub> -2500H <sub>5</sub>		8HV <sub>0.3</sub> -2500H <sub>5</sub>		5HV <sub>1</sub> -2500HV <sub>50</sub>	
Brightness of indentation	Provided					
Hardness conversion	For "S" model only: provided all kinds of data conversion by using menu					
Printer	For "S" model only : Provided					
Electricity loss protection device	For "S" model only provided by lithium battery					
Computer communication	For "S" model only: Provided with RS-232C output					
Contour size	650mmx 540 mm x 270 mm					
Weight	35 kg		35kg		45kg	
Power supply	AC 110 V ± 10% / 60 Hz					

### Standard accessories:

- ◆ Vickers indenter 1pcs,
- ◆ Test table (big, medium, small) 1pcs,
- ◆ Weight 3-4 pcs,
- ◆ Horizontal regulating screw 4 pcs,
- ◆ Vickers test block (high, medium) 1 pcs,
- ◆ Power cord 1 pcs,
- ◆ Back up bulb 2 pcs,
- ◆ Measuring microscope 1 pcs,
- ◆ Object lens 10x, 25x 1 pcs,
- ◆ Certification of fitness 1 pcs,
- ◆ Product operating manual 1 pcs,
- ◆ Printer operating manual 1 pcs,

### Optional accessories:

- ◆ Forcipate test table
- ◆ Cylindrical test table
- ◆ Fine specimen measuring test table
- ◆ X-Y plotter
- ◆ Gradienter
- ◆ Knoop indenter
- ◆ DF-3000 model camera
- ◆ Magazine
- ◆ Special single page magazine
- ◆ Photographic eye piece
- ◆ Main body of photographic instrument linker



# HVS-1000 DIGITAL MICRO HARDNESS TESTER

## HV-1000 MICRO HARDNESS TESTER



**Application:** A Vickers hardness test has two major superior features: one is that a hardness value obtained by this test is un-comparably highly accurate and constant regardless of a load, and the other is that the hardness value can be obtained at the same scale. In order to make most of these features, it is necessary to improve the accuracy of a tester to extreme.

Automating loading and unloading operations without delay, our factory has fully recognized that the basic know-how of manufacturing a Vickers hardness tester is to make a "complete indentation" by eliminating unstableness of a load shaft and by controlling a lever system precisely. Based on this basic know-how completed in Model HV-1000, we reduced manufacturing costs and spaces in Model HVS-1000 compared to a processor separable type by because reading by a micrometer is controlled by a microcomputer via a rotary encoder and a digital display unit a built-in a main body. Secure and efficient hardness measurement is now available by adding sure basic know-how to high technology.

Since both HV-1000 and HVS-1000 have two object lens: one for measurement (\*40) and the other for observation (\*10), and employ a turret switching system, an indenting position can be accurately determined. As they have two optical paths respectively, if you mount a photographic device onto the upper part of the tester, a clear picture of metal structure can be taken at any time. Thus, this instrument can function as a metallurgical microscope.

### Specifications:

Items		Model	HVS-1000	HV-1000
Test load			0.098, 0.246, 0.49, 0.98, 1.96, 2.94, 4.90, 9.80N (10gf-1000gf)	
Loading mechanism			Automatic loading and releasing method	
Load holding time			5-60 sec	
Magnification of microscope;			For measurement: x400(object lens 40x eyepiece 10) For observation: x100 (Object lens 10x eyepiece 10)	
Measuring microscope	mechanical			●
	digital		●	
	Max. measuring length		300 μ m	
	Min. measuring unit		0.025 μ m	0.5 μ m
Max. height of specimen			Approx. 65 mm	
Max. depth of specimen			Approx. 85 mm	
Micro test table			Dim: 100mm x 100 mm Max. movement: 25 mm in X & Y axis Min. micro graduation: 1/100 mm	
Digital data display:	Diagonal length		Max.4digits & min. 0.025 μ m	
	Hardness value		Max. 5 digits & min. 0.1	
Automatic recorder			Printer	
Photographic device			Possible to mourst at any time	
Dim:(mm)			290 x 405 x 480	
Tester weight			25 kg	
Power supply			For overseas , possible to change AC110V ± 10%	



**HV-1000**



**HVS-1000**

### Optional accessories:

Small V-shape anvil, Large V-shape anvil, Kroop indenter

Fine specimen measuring device (V-shape), Various photographic equipments

# MICRO HARDNESS TESTER



## Brief Introduction:

MHV2000 Digital Micro hardness Tester is a hi-tech product to merge optics, machinery and electricity into an organic whole. This instrument is new and beautiful in modeling, and has fine reliability, operability and visibility, being the upgrade and update product of micro hardness tester.

The machine is to adopt computer software programming, high-power optical measuring system, and photoelectric sensor technique, etc, through soft keys input, it is able to regulate and measure the strength of light source, to select Vickers and Knoop test method, to maintain time, file no and storage, etc. It can provide the conversion table of various hardness number for reference. In LCD large screen display, it can display testing method, testing force and measuring indentation length, hardness value, dwell time of testing force, measuring times, and can key in year, month & date, testing result and data processing, etc. to be outputted through printer.

The hardness tester can be equipped with camera device; it can take photos of tested indentation and material metallographic composition. The hardness tester is applicable to measure micro hardness of micro & thin specimen, etc., and determine micro hardness of fragile materials, such as glass, ceramic, agate, etc., being the ideal hardness testing instrument for scientific research institution, enterprise and quality inspection department to perform research and detection.

## **MHV-2000 Digital Microhardness Tester**

### Specifications

Testing Pressure: 0.098, 0.246, 0.49, 0.98, 1.96, 2.94, 4.90, 9.80N

Applied method of testing force: Autonomic

Magnification of Microscope: 100 × (in observation) 400 × (in measurement)

Pressure Holding Time: 0-60s (it can be random set according to the requirement)

Min. Measurable Unit: 0.0625 μm

Max. Height of specimen: 75mm

Distance from Indenter's center to outerwall : 95mm

## **MHV-2000S Video Measuring Digital Micro Hardness Tester**

It is added with DM-2003 video measuring device on main body of MHV2000 digital micro hardness tester.

DM-2003 video measuring device composed of CCD and 6.8 inch color LCD etc..

After MHV-2000S equips it, the indentation will be displayed on the LCD directly. The work process can be visualised and measuring is more accurate avoiding fatigue and man-made error.

Many people can look into work process at the same time. It is a perfect hardness tester for modern laboratory, testing room, teaching and factory test etc.