

Catalog 8004

## Hardness Testing Instrument



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# Manual Rockwell Hardness Tester Vexus SHR-150M

## Applications:

Vexus SHR-150M is an effective manual Rockwell testing machine with high accuracy, reliability and durability, it is applied at the workshops and measurement departments for determining the Rockwell hardness of the ferrous and non-ferrous metals.

## Characteristic:

- Vexus SHR-150M analogue gauge resolution is 0.5HR, it is useful to improve the reading accuracy than traditional 1HR resolution;
- Vexus SHR-150M force knob adopts the metal material to replace the plastic, it improves the instrument using-life a lot;
- Vexus SHR-150M loading, dwell and unloading is buffering by oil pump, it eliminate the operator's tiredness.
- Vexus SHR-150M intenter protector is available to improve the using lifetime of indenter.

## Specifications:

Product Name	Manual Rockwell Hardness Tester
Model	Vexus SHR-150M
Code#	811-111
Rockwell Scales	HRA,HRB,HRC
Preliminary Test Force	10Kgf(98.07N)
Test Force	60Kgf(558.4N),100Kgf(980.7N),150Kgf(1471N)
Dwell Time	Adjustable 1-60s
Hardness Indication	Analogue Display
Resolution	0.5HR
Loading Control	Manual
Max. Height Of Specimen	175mm
Instrument Throat	165mm
Dimension(LxWxH)	520 x215 x700mm
Packing Dimension	630 x440 x960mm
Gross/Net Weight	120Kg/90Kg
Execution Standard	GB/T230.2, JJG112, EN-ISO 6508 , ASTM E-18



Vexus SHR-150M(#811-111)

## Standard Delivery:

Standard Delivery	Code#
Instrument Main Body	811-111
Hardness Block (57-70) HRC	811-601
Hardness Block (20-33) HRC	811-611
Hardness Block (85-100) HRB	811-621
Ø1.588mm Ball Indenter	811-411
Ø1.588mm Steel Ball	811-421
Cone Diamond Indenter	811-401
Ø 150mm Flat anvil	811-541
Ø 55mm V-shape Anvil	811-521
Weight A	811-711
Weight B	811-721
Weight C	811-731
Accessories Box	811-901
Anti-dust Cover	811-911
Instrument Manual	Vexus SHR-150M





# Electronic Rockwell Hardness Tester Vexus SHR-150E

## Applications:

Vexus SHR-150E is an effective electronic Rockwell testing machine with high accuracy, reliability and durability, it is applied at the workshops and measurement departments for determining the Rockwell hardness of the ferrous and non-ferrous metals.

## Characteristic:

- Vexus SHR-150E analogue gauge resolution is 0.5HR, it is useful to improve the reading accuracy than traditional 1HR resolution;
- Vexus SHR-150E dwell time from 1 to 60s can be setup by the "time key" on the panel, it is much convenient than the setup on the manual hardness tester;
- Vexus SHR-150E force knob adopts the metal material to replace the plastic, it improves the instrument using-life a lot;
- Vexus SHR-150E loading, dwell and unloading is buffering by electronic motor automatically, doesn't need the operator to handle it, it eliminates the human operation error maximum.
- Vexus SHR-150E indenter protector is available to improve the using lifetime of indenter.

## Specifications:

Product Name	Electronic Rockwell Hardness Tester
Model	Vexus SHR-150E
Code#	811-121
Rockwell Scales	HRA,HRB,HRC
Preliminary Test Force	10Kgf(98.07N)
Test Force	60Kgf(588.4N),100Kgf(980.7N),150Kgf(1471N)
Dwell Time	Adjustable 1-60s
Hardness Indication	Analogue Display
Resolution	0.5HR
Loading Control	Electronic
Max. Height Of Specimen	175mm
Instrument Throat	165mm
Dimension(LxWxH)	520 x215 x700mm
Packing Dimension	630 x440 x960mm
Gross/Net Weight	120Kg/90Kg
Execution Standard	GB/T230.2, JJG112, EN-ISO 6508, ASTM E-18



Vexus SHR-150E(#811-121)

## Standard Delivery:

Standard Delivery	Code#
Instrument Main Body	811-121
Hardness Block (57-70) HRC	811-601
Hardness Block (20-33) HRC	811-611
Hardness Block (85-100) HRB	811-621
Ø1.588mm Ball Indenter	811-411
Ø1.588mm Steel Ball	811-421
Cone Diamond Indenter	811-401
Ø 150mm Flat Anvil	811-541
Ø 55mm V-shape Anvil	811-521
Ø 55mm Flat Anvil	811-511
Weight A/B/C	811-711/721/731
Power Cable	811-801
Accessories Box-	811-901
Anti-dust Cover	811-911
Instrument Manual	Vexus SHR-150E



# Digital Rockwell Hardness Tester Vexus SHR-150C

## Characteristic:

- Vexus SHR-150C is a half automatic and intelligent hardness testing machine, except to lift up the anvil to touch the specimen and select the test force: 60Kgf(588.4N), 100Kgf(980.7N) and 150Kgf(1471N) in hand-knob manually, the other operations are entirely automatic.
- The testing force, the process of loading, dwell and unloading, the hardness testing value, and the corresponding converted scale are displayed on LCD screen automatically.
- Vexus SHR-150C system will remind the operator to select the corresponding testing force and indenter after scales choosing, and the automatic hardness testing and digital 0.1HR resolution display avoids the man-made error and enhance the measuring accuracy.
- Vexus SHR-150C force knob adopts the metal material to replace the plastic material, it improves the instrument using-life greatly.
- Vexus SHR-150C can make the hardness conversion among 14 hardness scales: HRA, HRB, HRC, HRD, HRE, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T, it doesn't need the operator to trace and check the fussy hardness comparison table again.
- Vexus SHR-150C saves, displays and analyzes the value of maximum, minimum, average and tolerance automatically, the mini-printer prints the main measuring data automatically, and it supports PC communication in RS232 interface and cable.



Vexus SHR-150C(#811-131)

## Specifications:

Product Name	Digital Rockwell Hardness Tester
Model	Vexus SHR-150C
Code#	811-131
Rockwell Scales	HRA,HRB,HRC,HRD,HRE,HRE,HRC,HRH,HRk,HRL,HRM,HRR
Preliminary Test Force	10Kgf(98.07N)
Test Force	60Kgf(588.4N),100Kgf(980.7N),150Kgf(1471N)
Dwell Time	Adjustable 1-60s
Hardness Indication	digital LCD Display
Resolution	0.1HR
Loading Control	Automatic
Data Output	RS 232/Printer
Auto Hardness Conversion	HB, HK, HV, etc
Max. Height Of Specimen	175mm
Instrument Throat	165mm
Dimension(LxWxH)	520 x215 x700mm
Packing Dimension	630 x440 x960mm
Gross/Net Weight	120Kg/90Kg
Execution Standard	GB/T230.2, JJG112, EN-ISO 6508 , ASTM E-18

## Standard Delivery:

Standard Delivery	Code#
Instrument Main Body	811-131
Hardness Block (57-70) HRC	811-601
Hardness Block (20-33) HRC	811-611
Hardness Block (85-100) HRB	811-621
Ø1.588mm Ball Indenter	811-411
Ø1.588mm Steel Ball	811-421
Cone Diamond Indenter	811-401
Ø 150mm Flat Anvil	811-541
Ø 55mm V-shape Anvil	811-521
Weight A/B/C	811-711/721/731
Mini-Printer	811-831
Accessories Box	811-901
Power Cable	811-801
Instrument Fuse	811-811
Instrument Manual	Vexus SHR-150C



# Manual Superficial Rockwell Hardness Tester Vexus SHR-45M

## Applications:

Vexus SHR-45M is an effective manual superficial Rockwell testing machine with high accuracy, reliability and durability, it is applied at the workshops and measurement departments for determining the superficial Rockwell hardness of the ferrous and non-ferrous metals.

## Characteristic:

- Vexus SHR-45M analogue gauge resolution is 0.5HR, it is useful to improve the reading accuracy than traditional 1HR resolution;
- Vexus SHR-45M force knob adopts the metal material to replace the plastic, it improves the instrument using-life a lot;
- Vexus SHR-45M loading, dwell and unloading is buffering by oil pump, it eliminate the operator's tiredness.
- Vexus SHR-45M intenter protector is available to improve the using lifetime of indenter.

## Specifications:

Product Name	Manual Superficial Rockwell Hardness Tester
Model	Vexus SHR-45M
Code#	811-211
Rockwell Scales	HR15N,HR30N,HR45N,HR15T,HR30T,HR45T
Preliminary Test Force	3Kgf(29.42N)
Test Force	15Kgf(147.1N),30Kgf(294.2N),45Kgf(441.3N)
Dwell Time	Adjustable 1-60s
Hardness Indication	Analogue Display
Resolution	0.5HR
Loading Control	Manual
Max. Height Of Specimen	175mm
Instrument Throat	165mm
Dimension(LxWxH)	520 x215 x700mm
Packing Dimension	630 x440 x960mm
Gross/Net Weight	120Kg/90Kg
Execution Standard	GB/T230.2, JJG112, EN-ISO 6508 , ASTM E-18



Vexus SHR-45M(#811-211)

## Standard Delivery:

Standard Delivery	Code#
Instrument Main Body	811-211
Hardness Block HR30T	811-661
Hardness Block HR15N	811-671
Hardness Block HR30N	811-681
Ø1.588mm Ball Indenter	811-411
Ø1.588mm Steel Ball	811-421
Cone diamond Indenter	811-401
Ø 150mm Flat Anvil	811-541
Ø 55mm V-shape Anvil	811-521
Ø 55mm Flat Anvil	811-511
Weight 1	811-741
Weight 2	811-751
Weight 3	811-761
Accessories Box	811-901
Instrument Manual	Vexus SHR-45M



# Electronic Superficial Rockwell Hardness Tester Vexus SHR-45E

## Applications:

Vexus SHR-45E is an effective electronic Superficial Rockwell testing machine with high accuracy, reliability and durability, it is applied at the workshops and measurement departments for determining the superficial Rockwell hardness of the ferrous and non-ferrous metals.

## Characteristic:

- Vexus SHR-45E analogue gauge resolution is 0.5HR, it is useful to improve the reading accuracy than traditional 1HR resolution;
- Vexus SHR-45E dwell time from 1 to 60s can be setup by the "time key" on the panel, it is much convenient than the setup on the manual hardness tester;
- Vexus SHR-45E force knob adopts the metal material to replace the plastic, it improves the instrument using-life a lot;
- Vexus SHR-45E loading, dwell and unloading is buffering by electronic motor automatically, doesn't need the operator to handle it, it eliminates the human operation error maximum.
- Vexus SHR-45E indenter protector is available to improve the using lifetime of indenter.

## Specifications:

Product Name	Electronic Superficial Rockwell Hardness Tester
Model	Vexus SHR-45E
Code#	811-221
Rockwell Scales	HR15N,HR30N,HR45N,HR15T,HR30T,HR45T
Preliminary Test Force	3Kgf(29.42N)
Test Force	15Kgf(147.1N),30Kgf(294.2N),45Kgf(441.3N)
Dwell Time	Adjustable 1-60s
Hardness Indication	Analogue Display
Resolution	0.5HR
Loading Control	Electronic
Max. Height Of Specimen	170mm
Instrument Throat	140mm
Dimension(LxWxH)	520 x215 x700mm
Packing Dimension	630 x440 x960mm
Gross/Net Weight	120Kg/90Kg
Execution Standard	GB/T230.2, JJG112, EN-ISO 6508, ASTM-E-18



Vexus SHR-45E(#811-221)

## Standard Delivery:

Standard Delivery	Code#
Instrument Main Body	811-221
Hardness Block HR30T	811-661
Hardness Block HR15N	811-671
Hardness Block HR30N	811-681
Ø1.588mm Ball Indenter	811-411
Ø1.588mm Steel Ball	811-421
Cone Diamond Indenter	811-401
Ø 150mm Flat anvil	811-541
Ø 55mm V-shape Anvil	811-521
Ø 55mm Flat Anvil	811-511
Weight 1/2/3	811-741/751/761
Instrument Fuse	811-811
Power Cable	811-801
Accessories Box	811-901
Instrument Manual	Vexus SHR-45E





# Digital Superficial Rockwell Hardness Tester Vexus SHR-45C



## Characteristic:

- Vexus SHR-45C is a half automatic and intelligent hardness testing machine, except to lift up the anvil to touch the specimen and select the test force: 15Kgf(147.1N), 30Kgf(294.2N) and 45Kgf(441.3N) in hand-knob manually, the other operations are entirely automatic.
- The testing force, the process of loading, dwell and unloading, the hardness testing value, and the corresponding converted scale are displayed on LCD screen automatic.
- Vexus SHR-45C system will remind the operator to select the corresponding testing force and indenter after scales choosing, and the automatic hardness testing and digital 0.1HR resolution display avoids the man-made error and enhance the measuring accuracy.
- Vexus SHR-45C force knob adopts the metall material to replace the plastic material, it improves the instrument using-life greatly.
- Vexus SHR-45C can make the hardness conversion among 14 hardness scales: HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T, it doesn't need the operator to trace and check the fussy hardness comparison table again.
- Vexus SHR-45C saves, displays and analyzes the value of maximum, minimum, average and tolerance automatically, the mini-printer prints the main measuring data automatically, and it supports PC communication in RS232 interface and cable.

## Specifications:

Product Name	Digital Superficial Rockwell Hardness Tester
Model	Vexus SHR-45C
Code#	811-231
Rockwell Scales	HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
Preliminary Test Force	3Kgf(29.42N)
Test Force	15Kgf(147.1N), 30Kgf(294.2N), 45Kgf(441.3N)
Dwell Time	Adjustable 1-60s
Hardness Indication	digital LCD Display
Resolution	0.1HR
Loading Control	Automatic
Data Output	RS 232/Printer
Auto Hardness Conversion	HRC, HRB, HRA, HK, HV, HBW
Max. Height Of Specimen	175mm
Instrument Throat	165mm
Dimension(LxWxH)	520 x 215 x 700mm
Packing Dimension	630 x 440 x 960mm
Gross/Net Weight	120Kg/90Kg
Execution Standard	GB/T230.2, JJG112, EN-ISO 6508, ASTM E-18



Vexus SHR-45C(#811-231)

## Standard Delivery:

Standard Delivery	Code#
Instrument Main Body	811-131
Hardness Block HR30T	811-661
Hardness Block HR15N	811-671
Hardness Block HR30N	811-681
Ø1.588mm Ball Indenter	811-411
Ø1.588mm Steel Ball	811-421
Cone Diamond Indenter	811-401
Ø 150mm Flat Anvil	811-541
Ø 55mm V-shape Anvil	811-521
Ø 55mm Flat Anvil	811-511
Weight 1/2/3	811-741/751/761
Power Cable	811-801
Mini-Printer	811-911
Accessories Box	811-831
Instrument Manual	Vexus SHR-45C

# Digital Superficial Twin Rockwell Hardness Tester

## SHR-145

### Applications:

SHR-145 is a effective and affordable hardness testing machine with novel appearance and unique inside structure, features high measuring accuracy, reliable performance and applicable to wide fields, it is applicable to measure hardness testing of both Rockwell and Superficial Rockwell. It can measure the hardness of hard metals, carburizing steels, quenching steels, hard cast irons, mild steels, A1, Cu and malleable irons

SHR-145 has big LCD screen to display the measuring data, and it has the hardness conversion between Rockwell, Brinell, and Vickers, and it has other functions, such as, dwell time adjustment, data dispose, storage, printing and RS-232 output, etc.

### Specifications:

Product Name	Digital Superficial Twin Rockwell Hardness Tester
Model	SHR-145
Code#	811-152
Rockwell Scales	HRA,HRB,HRC,HR15N,HR30N,HR45N,HR15T,HR30T,HR45T
Preliminary Test Force	3Kgf(29.4N), 10kgf(98.7N)
For Superficial Rockwell Testing	15Kgf(147.1N),30Kgf(294.2N),45Kgf(441.3N)
For Rockwell hardness Testing	60Kgf(588.4N),100Kgf(980.7N),150Kgf(1471N)
Dwell Time	Adjustable 1-60s
Hardness Indication	Digital LCD Display
Resolution	0.1HR
Loading Control	Automatic
Data Output	RS 232/Printer
Auto Hardness Conversion	HRC、HRB、HRA、HV、HK、HBW、etc
Max. Height Of Specimen	180mm
Instrument Throat	160mm
Dimension(LxWxH)	520 x215 x700mm
Packing Dimension	630 x440 x960mm
Gross/Net Weight	120Kg/90Kg
Execution Standard	GB/T230.2, JJG112, EN-ISO 6508 , ASTM-E-18



SHR-145(#811-152)

### Standard Delivery:

Standard Delivery	Code#
Hardness Block HRT	811-662
Hardness Block HRN	811-672
Hardness Block(57-70) HRC	811-602
Hardness Block(20-33) HRC	811-612
Hardness Block(85-100) HRB	811-622
Ø1.588mm Ball Indenter	811-412
Ø1.588mm Steel Ball	811-422
Cone diamond Indenter	811-402
Ø 150mm Flat Anvil	811-542
Ø 55mm V-shape Anvil	811-522
Ø 55mm Flat Anvil	811-512
Weight A/B/C	811-712/722/732
Instrument Fuse	811-812
Mini-Printer	811-832
Power Cable	811-802
Accessories Box	811-902
Instrument Manual	SHR-145





# Electronic Universal Hardness Tester SHR-187.5

## Characteristic:

- SHR-187.5 is a universal hardness testing instrument for the measurement of Brinell, Rockwell and Vickers scale.
- SHR-187.5 equip 7-testing-foce and 5-indenter, it is universal to measure a lot of material.
- SHR-187.5 dwell time from 1 to 60S can be setup by the "time key" on the panel, it is much convenient than the setup on the manual hardness tester;
- SHR-187.5 force knob adopts the metal material to replace the plastic, it improves the instrument using-life greatly;
- SHR-187.5 loading, dwell and unloading is driven by electronic motor automatically, doesn't need the operator to handle it, it eliminates the human operating error maximum.

## Specifications:

Product Name	Electronic Universal Hardness Tester
Model	SHR-187.5
Code#	811-141
Rockwell Scales	HRA, HRB, HRC
Rockwell Testing Force	60Kgf(588.4N)、100Kgf(980.7N)、150Kgf(1471N)
Brinell Scales	HBW1/30、HBW2.5/62.5、HBW10/100、HBW2.5/187.5
Brinell Testing Force	31.25Kgf(306.5N)、62.5Kgf(612.9N)、187.5Kgf(1839N)
Vickers Scales	HV 30、HV100
Vickers Testing Force	30Kgf(294.2N)、100Kgf(980.7N)
Rockwell Hardness Indication	Analogue Display
Rockwell Resolution	0.5HR
Loading Control	Automatic
Magnification of Microscope	Brinell:37.5x; Viceers:75x
Dwell Time	2~60s
Max. Height Of Specimen	Rockwell:170mm; Brinell, Vickers:140mm
Instrument Throat	165mm
Dimension(LxWxH)	520 x215 x700mm
Packing Dimension	630 x440 x960mm
Gross/Net Weight	120Kg/90Kg
Execution Standard	GB/T230.2, JJG112, EN-ISO 6508 , ASTM E-18



SHR-187.5(#811-141)

## Standard Delivery:

Standard Delivery	Code#
Hardness Block (57-70)HRC	811-601
Hardness Block (20-33)HRC	811-611
Hardness Block (85-100)HRB	811-621
Vickers Hardness Block HV 30	821-621
HBW2.5/187.5 Hardness Block	831-621
Ø1.588mm Rockwell Ball Indenter	811-411
Ø2.5mm Brinell Ball Indenter	831-431
Ø5mm Brinell Ball Indenter	831-421
Rockwell Cone Diamond Indenter	811-401
Vickers Indenter	821-401
Ø 150mm Flat Anvil	811-541
Ø 55mm V-shape Anvil	811-521
Ø 55mm Flat Anvil	811-511
15x analogue Eyepiece	831-241
2.5x Brinell Objective	831-251
5x Vickers Objective	821-261
Power Cable	811-801
Accessories Box	811-901
Instrument Manual	SHR-187.5



# Digital Universal Hardness Tester

## Vexus SHR-187.5

### Applications:

- Vexus SHR-187.5 is a universal hardness testing instrument for the measurement of Brinell, Rockwell and Vickers scale.
- Vexus SHR-187.5 equip 7-testing-foce and 5-indenter, it is universal to measure a most of metal material.
- Vexus SHR-187.5 dwell time from 2 to 60S can be setup by the "time key" inside the LCD panel, it is much convenient than the setup on the manual hardness tester;
- Vexus SHR-187.5 loading ,dwell and unloading is driven by electronic motor automatically , doesn't need the operator to handle it, it eliminates the human operating error maximum ;
- Vexus SHR-187.5 doesn't need the operator to read and check the hardness scale table ,it will compute and display the testing result once press the key of digital length sensor

### Specifications:

Product Name	Digital Universal Hardness Tester
Model	Vexus SHR-187.5
Code#	811-142
Rockwell Scales	HRA, HRB, HRC
Rockwell Testing Force	60Kgf(588.4N)、100Kgf(980.7N)、150Kgf(1471N)
Brinell Scales	HBW1/30、HBW2.5/62.5、HBW10/100、HBW2.5/187.5
Brinell Testing Force	31.25Kgf(306.5N)、62.5Kgf(612.9N)、187.5Kgf(1839N)
Vickers Scales	HV 30、HV100
Vickers Testing Force	30Kgf(294.2N)、100Kgf(980.7N)
Rockwell Hardness Indication	Digital LCD display
Resolution	0.1HR
Loading Control	Automatic
Data Output	RS 232/Printer
Magnification of Microscope	Brinell:37.5x; Vickers:75x
Dwell Time	2~60s
Max. Height Of Specimen	Rockwell:170mm; Brinell, Viceers:140mm
Instrument Throat	165mm
Dimension(LxWxH)	520 x215 x700mm
Packing Dimension	630 x440 x960mm
Gross/Net Weight	120Kg/90Kg
Execution Standard	GB/T230.2, JJG112, EN-ISO 6508 , ASTM E-18



Vexus SHR-187.5(#811-142)

### Standard Delivery:

Standard Delivery	Code#
Hardness Block (57-70)HRC	811-602
Hardness Block (20-33)HRC	811-612
Hardness Block (85-100)HRB	811-622
Vickers Hardness Block HV 30	821-622
HBW2.5/187.5 Hardness Block	831-622
Ø1.588mm Rockwell Ball Indenter	811-412
Ø2.5mm Brinell Ball Indenter	831-432
Ø5mm Brinell Ball Indenter	831-422
Rockwell Cone Diamond Indenter	811-402
Vickers Indenter	821-402
Ø 150mm Flat Anvil	811-542
Ø 55mm V-shape Anvil	811-522
Ø 55mm Flat Anvil	811-512
15x Digital Eyepiece	831-242
Mini-Printer	811-832
2.5x Brinell Objective	831-252
5x Vickers Objective	821-262
Power Cable	811-802
Accessories Box	811-902
Instrument Manual	Vexus SHR-187.5

# Electronic Brinell Hardness Tester SHB-3000E



## Applications:

SHB-3000E is an affordable electronic Brinell testing machine with high accuracy, reliability and durability, it is applied at the workshops and measurement departments for determining the Brinell hardness of the material of ferrous and non-ferrous metals.

## Characteristic:

- SHB-3000E adopts the pressure sensor to replace the traditional weight, this innovative design makes the instrument more accurate.
- SHB-3000E selection of testing force and dwell time is controlled and monitored on the front panel, it is automatic during the process of loading, dwell and unloading.
- SHB-3000E uses 20x Brinell measuring microscope to measure the diameter of indentation, then the operator traces the Brinell hardness table to get the testing result.



20x Mechanic Microscope  
(831-211)



SHB-3000E(#831-111)

## Specifications:

Product Name	Electronic Brinell Hardness Tester	
Model	SHB-3000E	
Code#	831-111	
Testing Force	62.5Kgf, 100Kgf, 125Kgf, 187.5Kgf, 250Kgf, 500Kgf, 750Kgf, 1000Kgf, 1500Kgf, 3000Kgf	
	612.9N, 980N, 1226N, 1839N, 2452N, 4900N, 7355N, 9800N, 14700N, 29400N	
Testing Range	(8~650) HBW	
Hardness Display	Check the Table of Brinell Hardness Scale	
Magnification of Microscope	20x Mechanic Microscope	
Max. Height Of Specimen	225mm	
Instrument Throat	135mm	
Power Supply	AC220V/50Hz; 110V/60Hz	
Dimension(LxWxH)	893 x720 x747mm	
Gross/Net Weight	160Kg/130Kg	
Execution Standard	GB/T231.2, JIG150, EN-ISO 6506	
Accuracy of Brinell Hardness Testing		
Hardness Range	Max. Tolerance	Repetition
HBW≤ 125	≤ ± 3.5%	≤ 3.5%
125 < HBW≤225	≤ ± 2.5%	≤ 3.0%
HBW > 225	≤ ± 2.0%	≤ 2.5%

## Standard Delivery:

Standard Delivery	Code#
Instrument Main Body	831-111
20x Mechanic Microscope	831-211
Hardness Block HBW/3000/10	831-601
Hardness Block HBW/750/05	831-611
Ø10mm Ball Indenter	831-411
Ø5mm Ball Indenter	831-421
Ø2.5mm Ball Indenter	831-431
Ø 200mm Flat Anvil	831-551
Ø 60mm Flat Anvil	831-501
Ø 55mm V-shape Anvil	831-521
Power Cable	831-801
Accessories Box	831-901
Anti-dust Cover	831-911
Level Screw	831-931
Instrument Manual	SHB-3000E



# Digital Brinell Hardness Tester SHB-3000D

## Characteristic:

- SHB-3000D is a half automatic and intelligent Brinell hardness testing machine, it adopts the pressure sensor to replace the traditional quality weight, this innovative design makes the instrument more accurate.
- SHB-3000D selection of testing force and dwell time is controlled and monitored on the front panel, it is automatic during the process of loading, dwell and unloading.
- SHB-3000D adopts digital Brinell microscopes with adjustable LED illuminator, it doesn't need the operator to read the detail length of indentation, it only needs operator to aim the D1, D2 diameter of indentation and press the length key twice above the Microscope, then the built-in computer can compute the Brinell scale and display the final testing result on LCD display automatically.
- SHB-3000D doesn't need the operator to read the detail diameter of indentation and check the Brinell testing table, it improves the testing speed and accuracy of hardness testing obviously.



20x Digital Microscope  
(831-221)



SHB-3000D(#831-121)

## Specifications:

Product Name	Digital Brinell Hardness Tester	
Model	SHB-3000D	
Code#	831-121	
Testing Force	62.5Kgf, 100Kgf, 125Kgf, 187.5Kgf, 250Kgf, 500Kgf, 750Kgf, 1000Kgf, 1500Kgf, 3000Kgf	
	612.9N, 980N, 1226N, 1839N, 2452N, 4900N, 7355N, 9800N, 14700N, 29400N	
Testing Range	(8—650) HBW	
Hardness Display	LCD Display	
Magnification of Microscope	20x Digital Microscope	
Max. Height Of Specimen	225mm	
Instrument Throat	135mm	
Power Supply	AC220V/50Hz;110V/60Hz	
Dimension(LxWxH)	893 x720 x747mm	
Gross/Net Weight	160Kg/130Kg	
Execution Standard	GB/T231.2, JJG150, EN-ISO 6506	
Accuracy of Brinell Hardness Testing		
Hardness Range	Max. Tolerance	Repetition
HBW≤ 125	≤ ± 3.5%	≤ 3.5%
125 < HBW≤225	≤ ± 2.5%	≤ 3.0%
HBW > 225	≤ ± 2.0%	≤ 2.5%

## Standard Delivery:

Standard Delivery	Code#
Instrument Main Body	831-121
20x Digital Microscope	831-221
Hardness Block HBW/3000/10	831-601
Hardness Block HBW/750/05	831-611
Ø10mm Ball Indenter	831-411
Ø5mm Ball Indenter	831-421
Ø2.5mm Ball Indenter	831-431
Ø 200mm Flat Anvil	831-551
Ø 60mm Flat Anvil	831-501
Ø 55mm V-shape Anvil	831-521
Power Cable	831-801
Accessories Box	831-901
Anti-dust Cover	831-911
Level Screw	831-931
Instrument Manual	SHB-3000D





# Digital Brinell Hardness Tester

## SHB-3000C

### Characteristic:

- SHB-3000C is a half automatic and intelligent Brinell hardness testing machine, it adopts the pressure sensor to replace the traditional quality weight, this innovative design makes the instrument more accurate.
- SHB-3000C selection of testing force and dwell time is controlled and monitored on the front panel, it is automatic during the process of loading, dwell and unloading.
- SHB-3000C adopts digital Brinell microscopes with adjustable LED illuminator, it doesn't need the operator to read the detail length of indentation, it only needs operator to aim the D1, D2 diameter of indentation and press the length key twice above the Microscope, then the built-in computer can computer the Brinell scale and display the final testing result on LCD display automatically.
- SHB-3000C supports the hardness conversion, it can use Brinell scale to get conversion scale of HRC, HRB, HRC, HV, etc.
- SHB-3000C doesn't need the operator to read the detail diameter of indentation and check the Brinell testing table, it improves the testing speed and accuracy of hardness testing obviously.

### Specifications:

Product Name	Digital Brinell Hardness Tester	
Model	SHB-3000C	
Code#	831-131	
Testing Force	62.5Kgf, 100Kgf, 125Kgf, 187.5Kgf, 250Kgf, 500Kgf, 750Kgf, 1000Kgf, 1500Kgf, 3000Kgf	
	612.9N, 980N, 1226N, 1839N, 2452N, 4900N, 7355N, 9800N, 14700N, 29400N	
Testing Range	(8~650) HBW	
Hardness Display	LCD Display	
Magnification of Microscope	20x Mechanic Microscope	
Max. Height Of Specimen	225mm	
Instrument Throat	135mm	
Output Data	RS 232/Printer	
Auto Hardness Conversion	HR, HV, HK, etc	
Power Supply	AC220V/50Hz;110V/60Hz	
Dimension(LxWxH)	893 x720 x747mm	
Gross/Net Weight	160Kg/130Kg	
Execution Standard	GB/T231.2, JJG150, EN-ISO 6506	
Accuracy of Brinell Hardness Testing		
Hardness Range	Max. Tolerance	Repetition
HBW≤ 125	≡ ± 3.5%	≡ 3.5%
125 < HBW≤225	≡ ± 2.5%	≡ 3.0%
HBW> 225	≡ ± 2.0%	≡ 2.5%



SHB-3000C(#831-131)

### Standard Delivery:

Standard Delivery	Code#
Instrument Main Body	831-131
20x Digital Microscope	831-231
Hardness Block HBW/3000/10	831-601
Hardness Block HBW/750/05	831-611
Ø10mm Ball Indenter	831-411
Ø5mm Ball Indenter	831-421
Ø2.5mm Ball Indenter	831-431
Ø 200mm Flat Anvil	831-551
Ø 60mm Flat Anvil	831-501
Ø 55mm V-shape Anvil	831-521
Power Cable	831-801
Accessories Box	831-901
Anti-dust Cover	831-911
Mini-Printer	831-831
Instrument Manual	SHB-3000C

# Economical Manual Micro Vickers Hardness Tester

## HV-1000

### Characteristic:

- HV-1000 is a precision micro Vickers hardness testing machine integrated the technology of optics, mechanics and computer.
- HV-1000 equipped with LCD screen , the operation is more directly and clearly.



Flat Precision Clamp  
(#823-711)



Thin-piece Clamp  
(#823-751)



Filament Clamp  
(#823-761)

### Specifications:

Product Name		Manual-Turret Micro Vickers Hardness Tester	
Model		HV-1000	
Code#		823-101	
Testing Force	gf	10、25、50、100、200、300、500、1000	
	N	0.098、0.246、0.49、0.98、1.96、2.94、4.90、9.80	
Indentation Measurement		Mechanic Micrometer	
Loading Control		Automatic (Loading, Dwell, Unloading)	
Magnification of Microscope		Observation:10x; Measurement:40x	
Magnification on of Eyepiece		10x Eyepiece	
Dwell Time		Adjustable 5~60s	
Testing Range		1HV~2967HV	
X-Y Anvil		Size:100x100mm; Travel:25 x25mm; Resolution:2um	
Illumination		Adjustable LED light-source(Halogen is optional)	
Max. Height of Specimen		70mm	
Instrument Throat		95mm	
Power Supply		AC220V/50Hz;110V/60Hz	
Dimension(LxWxH)		425 x245 x490mm	
Packing Dimension		500 x 490 x 700mm	
Gross/Net Weight		45Kg/35Kg	
Execution Standard		GB/T4340.2, EN-ISO6507, ASTM E10-18, ASTM E-384	



HV-1000(#823-101)

### Standard Delivery:

Standard Delivery	Code#
Vickers Indenter	823-401
Vickers Hardness Block HV0.5	823-611
Vickers Hardness Block HV1	823-621
10x Eyepiece	823-341
Objectives 40x	823-331
Objectives 10x	823-311
X-Y Anvil	823-701
Power Cable	823-801
Accessories Box	823-901
Anti-dust Cover	823-911
Level Screw	823-931
Instrument Manual	HV-1000





# Economical Digital Micro Vickers Hardness Tester

## HVS-1000 series

### Characteristic:

- HVS-1000 is a precision micro Vickers hardness testing machine integrated the technology of optics, mechanics and computer.
- HVS-1000 equipped with LCD screen , the operation is more directly and clearly.



LCD Display (#832-821)

### Specifications:

Product Name		Manual-Turret Micro Vickers Hardness Tester		Auto-Turret Micro Vickers Hardness Tester
Model		HV-1000D	HVS-1000	HVS-1000Z
Code#		823-111	823-121	823-131
Testing Force	gf	10、25、50、100、200、300、500、1000		
	N	0.098、0.246、0.49、0.98、1.96、2.94、4.90、9.80		
Indentation Measurement		Digital Sensor Measurement		
Loading Control		Automatic (Loading, Dwell, Unloading)		
Output Data		Without	RS232/Mini-Printer	
Magnification of Microscope		Observation:10x; Measurement:40x		
Magnification on of Eyepiece		10x Digital Eyepiece		
Dwell Time		Adjustable 5~60s		
Testing Range		1HV~2967HV		
X-Y Anvil		Size:100x100mm; Travel:25 x25mm; Resolution:2um		
Illumination		Adjustable LED light-source(Halogen is optional)		
Max. Height of Specimen		70mm		
Instrument Throat		95mm		
Power Supply		AC220V/50Hz;110V/60Hz		
Dimension(LxWxH)		425 x245 x490mm		
Packing Dimension		500 x490 x700mm		
Gross/Net Weight		45Kg/35Kg		
Execution Standard		GB/T4340.2, EN-ISO6507, ASTM E10-18, ASTM E-384		



HV-1000D(#823-111)  
HVS-1000(#823-121)  
HVS-1000Z(#823-131)

### Standard Delivery:

Standard Delivery	Code#
Vickers Indenter	823-401
Vickers Hardness Block HV 0.5	823-611
Vickers Hardness Block HV 1	823-621
10x Digital Eyepiece	823-341
Objectives 40x	823-331
Objectives 10x	823-311
X-Y Anvil	823-701
Mini-Printer	823-831
Power Cable	823-801
Accessories Box	823-901
Anti-dust Cover	823-911
Level Screw	823-931
Instrument Manual	HV-1000D/HVS-1000



# Practical Micro Vickers Hardness Tester

## SMHV-1000 series

### Characteristic:

- SMHV-1000 series is a precision micro Vickers hardness testing machine integrated the technology of optics, mechanics and computer.
- SMHV-1000 series equipped with a large LCD screen, the operation is more directly and clearly.
- SMHV-1000 series can display the measuring methods, testing force, indentation length, hardness value, dwell time of the testing force as well as the number of measurement.
- SMHV-1000 series can save and revise the date, record the measuring results, compute the data, outputting the information with the printer.
- SMHV-1000 series hardness conversion among 17 hardness scales, and linking to PC in RS232 interface and cable.

### Specifications:

Product Name		Manual-Turret Micro Vickers Hardness Tester	Auto-Turret Micro Vickers Hardness Tester
Model		SMHV-1000	SMHV-1000A
Code#		823-151	823-161
Testing Force	gf	10、25、50、100、200、300、500、1000	
	N	0.098、0.246、0.49、0.98、1.96、2.94、4.90、9.80	
Indentation Measurement		Digital Sensor Measurement	
Loading Control		Automatic (Loading, Dwell, Unloading)	
Output Data		RS232/Mini-Printer	
Magnification of Microscope		Observation:10x; Measurement:40x	
Magnification on of Eyepiece		10x Digital Eyepiece	
Dwell Time		Adjustable 5~60s	
Testing Range		1HV~2967HV	
Auto Hardness Conversion		HRA, HRB, HRC, HV, HK, HBW, etc	
X-Y Anvil		Size:100x100mm; Travel:25 x25mm; Resolution:2um	
Illumination		Halogen Light- source (LED is optional)	
Max. Height of Specimen		70mm	
Instrument Throat		95mm	
Power Supply		AC220V/50Hz;110V/60Hz	
Dimension(LxWxH)		425 x245 x490mm	
Packing Dimension		530 x490 x700mm	
Gross/Net Weight		50Kg/40Kg	
Execution Standard		GB/T4340.2, EN-ISO6507, ASTM E10-18, ASTM E-384	



SMHV-1000(#823-151)  
SMHV-1000A(#823-161)

### Standard Delivery:

Standard Delivery	Code#
Vickers Indenter	823-401
Vickers Hardness Block HV 0.5	823-611
Vickers Hardness Block HV 1	823-621
10x Digital Eyepiece	823-341
Objectives 40x	823-331
Objectives 10x	823-311
X-Y anvil	823-701
Mini-Printer	823-831
Power Cable	823-801
Accessories Box	823-901
Anti-dust Cover	823-911
Level Screw	823-931
Instrument Manual	SMHV-1000/1000A

# 2Kg Micro Vickers Hardness Tester SMHV-2000 series

## Characteristic:

- SMHV-2000 series is a precision micro Vickers hardness testing machine integrated the technology of optics, mechanics and computer.
- SMHV-2000 series equipped with a large LCD screen, the operation is more directly and clearly.
- SMHV-2000 series can display the measuring methods, testing force, indentation length, hardness value, dwell time of the testing force as well as the number of measurement.
- SMHV-2000 series can save and revise the date, record the measuring results, compute the data, outputting the information with the printer.
- SMHV-2000 series hardness conversion among 17 hardness scales, and linking to PC in RS 232 interface and cable.

## Specifications:

Product Name		Manual-Turret Micro Vickers Hardness Tester	Auto-Turret Micro Vickers Hardness Tester
Model		SMHV-2000	SMHV-2000A
Code#		823-251	823-261
Testing Force	gf	10、25、50、100、200、300、500、1000、2000	
	N	0.098、0.246、0.49、0.98、1.96、2.94、4.9、9.8、19.6	
Indentation Measurement		Digital Sensor Measurement	
Loading Control		Automatic (Loading, Dwell, Unloading)	
Output Data		RS232/Mini-Printer	
Magnification of Microscope		Observation:10x; Measurement:40x	
Magnification on of Eyepiece		10x Digital Eyepiece	
Dwell Time		Adjustable 5~60s	
Testing Range		1HV~2967HV	
Auto Hardness Conversion		HRA, HRB, HRC, HV, HK, HBW, etc	
X-Y Anvil		Size:100x100mm; Travel:25 x25mm; Resolution:2um	
Illumination		Halogen Light- source (LED is optional)	
Max. Height of Specimen		70mm	
Instrument Throat		95mm	
Power Supply		AC220V/50Hz;110V/60Hz	
Dimension(LxWxH)		425 x245 x490mm	
Packing Dimension		530 x490 x700mm	
Gross/Net Weight		50Kg/40Kg	
Execution Standard		GB/T4340.2, EN-ISO6507, ASTM E10-18, ASTM E-384	



SMHV-2000(#823-251)  
SMHV-2000A(#823-261)

## Standard Delivery:

Standard Delivery	Code#
Vickers Indenter	823-401
Vickers Hardness Block HV0.5	823-611
Vickers Hardness Block HVT	823-621
10x Digital Eyepiece	823-341
Objectives 40x	823-331
Objectives 10x	823-311
X-Y Anvil	823-701
Mini-Printer	823-831
Power Cable	823-801
Accessories Box	823-901
Anti-dust Cover	823-911
Level Screw	823-931
Instrument Manual	SMHV-2000/2000A



# Practical Micro Vickers Hardness Tester

## SXHV-1000TA

### Characteristic:

- SXHV-1000TA is a precision micro Vickers hardness testing machine integrated the technology of optics, mechanics and computer.
- SXHV-1000TA equips with a large LCD touch screen, the operation is more directly and clearly. SXHV-1000TA can display the measuring methods, testing force, indentation length, hardness value, dwell time of the testing force as well as the number of measurement.
- SXHV-1000TA can save and revise the date, record the measuring results, compute the data, outputting the information with the printer,
- SXHV-1000TA hardness conversion among 17 hardness scales, and linking to PC in RS 232 interface and cable.

### Specifications:

Product Name		Auto-Turret Micro Vickers Hardness Tester
Model		SXHV-1000TA
Code#		823-171
Testing Force	gf	10、25、50、100、200、300、500、1000
	N	0.098、0.246、0.49、0.98、1.96、2.94、4.90、9.80
Indentation Measurement		Digital Sensor Measurement
Loading Control		Automatic (Loading, Dwell, Unloading)
Output Data		RS232/Mini-Printer
Magnification of Microscope		Observation:10x; Measurement:40x
Magnification on of Eyepiece		10x Digital Eyepiece
Auto Hardness Conversion		HRA,HRB, HRC , HV, HK, HBW , etc
Hardness Indication		LCD touch-screen display
Dwell Time		Adjustable 5~60s
Testing Range		1HV~2967HV
X-Y Anvil		Size:100x100mm; Travel:25 x25mm; Resolution:2um
Illumination		Adjustable LED light-source(Halogen is optional)
Max. Height of Specimen		70mm
Instrument Throat		95mm
Power Supply		AC220V/50Hz;110V/60Hz
Dimension(LxWxH)		425 x245 x490mm
Packing Dimension		500 x490 x700mm
Gross/Net Weight		50Kg/40Kg
Execution Standard		GB/T4340.2, EN-ISO6507, ASTM E10-18, ASTM E-384



SXHV-1000TA(#823-171)

### Standard Delivery:

Standard Delivery	Code#
Vickers Indenter	823-401
Vickers Hardness Block HV 0.5	823-611
Vickers Hardness Block HV 1	823-621
10x Digital Eyepiece	823-341
Objectives 40x	823-331
Objectives 10x	823-311
X-Y Anvil	823-701
Mini-Printer	823-831
Power Cable	823-801
Accessories Box	823-901
Anti-dust Cover	823-911
Level Screw	823-931
Instrument Manual	SXHV-1000TA

# Advanced Digital Micro Vickers Hardness Tester

## Vexus MHV-1000Z series

### Characteristic:

- Vexus MHV-1000Z Series are precision micro Vickers hardness testing machines integrated the technology of optics, mechanics and compute, and it is focus on the vickers testing under the small force, and mainly applicable to measure the hardness value of ferrous metals and non ferrous metals.
- Vexus MHV-1000Z Series equipped with a LCD screen, the operation is more directly and clearly.
- Vexus MHV-1000Z Series can display the measuring methods, testing force, indentation length, hardness value, dwell time of the testing force as well as the number of measurement.
- Vexus MHV-1000Z Series can save and revise the date, record the measuring results, compute the data, outputting the information with the printer,
- Vexus MHV-1000Z Series hardness conversion among 4 hardness scales, and linking to PC in RS 232 interface and cable.
- Vexus MHV-1000Z Series adopt the design of double indenters, it equips with HV and HK indenter together, It is more suitable to measure the hardness of IC thin sections, coatings, ply metals, glass, ceramics, agate, precious stones and other brittle and hard material.

### Specifications:

Product Name		Single-Indenter Digital Micro Vickers Hardness Tester	Double-Indenter Digital Micro Vickers Hardness Tester
Model		Vexus MHV-1000Z	Vexus MHV-1000ZK
Code#		823-113	823-123
Testing Force	gf	10、25、50、100、200、300、500、1000	
	N	0.098、0.246、0.49、0.98、1.96、2.94、4.90、9.80	
Indenter		HV Indenter	HV and HK Indenter
Lens & Indenter Switch		Auto-Turret	
Indentation Measurement		Digital Sensor Measurement	
Loading Control		Automatic (Loading, Dwell, Unloading)	
Magnification of Microscope		Observation:10x; Measurement:40x	
Digital Eyepiece		Magnification:10x	
Auto Hardness Conversion		HV、HRC、HB	
Hardness Indication		LCD display	
Dwell Time		Adjustable 1~99s	
Testing Range		1HV~2967HV	
X-Y Anvil		Size:100x100mm; Travel:25 x25mm; Resolution:2um	
Illumination		Adjustable LED 6V, Cold light-source	
Display		D1、D2、HV/HRC/HB/HK、Time	
Max. Height of Specimen		70mm	
Instrument Throat		95mm	
Power Supply		AC220V/50Hz;110V/60Hz	
Dimension(LxWxH)		490 x250 x395mm	
Packing Dimension		530 x450 x750mm	
Gross/Net Weight		50Kg/40Kg	
Execution Standard		GB/T4340.2, EN-ISO6507, ASTM E10-18, ASTM E-384	



Vexus MHV-1000Z (#823-113)  
Vexus MHV-1000ZK (#823-123)

### Standard Delivery:

Standard Delivery	Code#
Vickers Indenter	823-403
Knoop Indenter (MHV-1000ZK)	823-413
Vickers Hardness Block HV 0.5	823-613
Vickers Hardness Block HV 1	823-623
10x Digital Eyepiece	823-343
Objectives 40x	823-333
Objectives 10x	823-313
X-Y Anvil	823-703
Power Cable	823-803
Accessories Box	823-903
Anti-dust Cover	823-913
Level Screw	823-933
Instrument Manual	Vexus MHV-1000Z



# Automatic Micro Vickers Hardness Tester Vexus ZHV-1000V series

## Characteristic:

- Vexus ZHV-1000V series are automatic micro hardness testing machine integrate with the technology of optic, mechanism and computer, it is focus on auto-measuring of Vickers hardness testing under the little precision testing force, it has the most accuracy indenter repeating system and sharp optical path to meet the testing application.
- Vexus ZHV-1000V series equip with auto-platform, Vickers measuring software MV1000 and PC system, MV1000 can control the switch of objectives and indenters, the loading, dwell and unloading of indenter, and it can control the movement of auto-platform, the users can make the program to realize the Vickers measurement automatically.
- Vexus ZHV-1000V high-technology eliminate the measuring error maximally, and it improves the measuring efficiency and accuracy obviously.

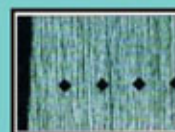
## Specifications:

Product Name		Single Indenter Auto Micro Vickers Hardness Tester	Double-Indenter Auto Micro Vickers Hardness Tester
Model		Vexus ZHV-1000V	Vexus ZHV-1000VK
Code#		825-133	825-143
Testing Force	gf	10、25、50、100、200、300、500、1000	
	N	0.098、0.246、0.49、0.98、1.96、2.94、4.90、9.80	
Indenter		HV Indenter	HV and HK Indenter
Lens & Indenter Switch		Auto-Turret	
Indentation Measurement		Digital Sensor Measurement	
Loading Control		Automatic (Loading, Dwell, Unloading)	
Magnification of Microscope	Observation:	10x;	20x;
	Measurement:	40x	40x
Digital Eyepiece		Magnification:10x	
Auto Hardness Conversion		HV、HRC、HB	
Dwell Time		Adjustable 1—99s	
Testing Range		5HV—3000HV	
PC Communication		P4:2.4G,80G Memory, USB interface and PCI slot, RS 232 port	
Auto X-Y Anvil		Size:100x100mm; Travel:25 x25mm; Resolution:1um	
Illumination		Adjustable LED 6V, Cold light-source	
Measuring Software		Vickers Hardness Measuring and Driven Software MV1000	
Video System		1/3" B/W CCD Camera; 1X CCD Adapter	
Max. Height of Specimen		70mm	
Power Supply		AC220V/50Hz;110V/60Hz	
Dimension(LxWxH)		490 x250 x395mm	
Packing Dimension		530 x450 x750mm	
Gross/Net Weight		70Kg/50Kg	
Execution Standard		GB/T4340.2, EN-ISO6507, ASTM E10-18, ASTM E-384	



Vexus ZHV-1000V(#825-133)

Vexus ZHV-1000VK(#825-143)



Multi-Point HV Indentation



Metallurgical Structure Image



HV Indentation



HK Indentation

## Standard Delivery:

Standard Delivery	Code#
Vickers Indenter	825-403
Knoop Indenter(ZHV-1000VK)	825-413
Vickers Hardness Block HV 0.5	825-613
Vickers Hardness Block HV 1	825-623
10x Digital Eyepiece	825-343
Objectives 40x	825-333
Objectives 10x	825-313
X-Y Auto Anvil	825*703
PC Host and 17" Monitor	Dell PC
Power Cable	825-803
Accessories Box	825-903
1x CCD Adapter	825-363
CCD Camera	484-132
Instrument Manual	Vexus ZHV-1000V





# Economical Macro Vickers Hardness Tester

## HV-10D series

### Characteristic:

- HV-10D Series is a half automatic and intelligent Vickers hardness testing machine, it adopts the close-loop force sensor to replace the traditional quality weight, this innovative design makes the instrument more accurate.
- HV-10D Series selection of testing force and dwell time is controlled and monitored on the front panel, it is automatic during the process of loading, dwell and unloading.
- HV-10D Series adopts digital microscopes with adjustable LED illuminator, doesn't the operator to read the detail length of indentation, it only needs the operator to aim the D1, D2 diameter of indentation and press the length key twice, then the built-in computer can compute the Vickers scale and display the final testing result on LCD display automatically.
- HV-10D Series doesn't need the operator to read the diagonal of indentation and check the Vickers testing table, it improves the speed and accuracy of hardness testing obviously.

### Specifications:

Product Name		Vickers Hardness Tester		
Model		HV-10D	HV-30D	HV-50D
Code#		821-111	821-121	821-131
Testing Force	Kgf	0.3, 0.5, 1, 2, 2.5, 3, 5, 10	0.5, 1, 2, 3, 5, 10, 20, 30	1, 2, 3, 5, 10, 20, 30, 50
	N	2.94, 4.9, 9.8, 19.6, 24.5, 29.4, 49.0, 98.0	4.9, 9.8, 19.6, 29.4, 49, 98, 196, 294	9.8, 19.6, 29.4, 49.0, 98.0, 196, 294, 490
Testing Range		8HV0.3~2900HV10	8HV0.5~2900HV30	8HV1~2900HV50
Loading Control		Automatic (Loading, Dwell, Unloading)		
Magnification of Microscope		Observation:10x; Measurement:20x		
Digital Eyepiece		Magnification:10x		
Dwell Time		Adjustable 0~60s		
Hardness Indication		1HV/LCD Display		
Illumination		Adjustable LED		
Max. Height of Specimen		170mm		
Instrument Throat		130mm		
Power Supply		AC220V/50Hz;110V/60Hz		
Dimension(LxWxH)		535 x225 x580mm		
Packing Dimension		630 x460 x710mm		
Gross/Net Weight		50Kg/40Kg		
Execution Standard		GB/T4340.2, EN-ISO6507, ASTM E10-08, ASTM E-384		



HV-10D(#821-111)  
HV-30D(#821-121)  
HV-50D(#821-131)

### Standard Delivery:

Standard Delivery	Code#
Vickers Indenter	821-401
Built-in 10x Objective	821-311
Built-in 20x Objective	821-321
HV1 Hardness Block	821-601
HV10 Hardness Block	821-631
10x Digital Eyepiece	821-341
V-Shape Anvil	821-521
Power Cable	821-801
Accessories Box	821-901
Anti-dust Cover	821-911
Level Screw	821-931
Instrument Manual	HV-10D/30D/50D



# Practical Digital Macro Vickers Hardness Tester

## HVS-10Z series

### Characteristic:

- It applies computer software program, high-resolution optical measuring system and photoelectric sensor. Through Key-input on the panel, it can adjust brightness of light source, hardness converse comparison, dwell time, file number and store, etc.
- LCD screen displays test method, test force, length of diagonal, hardness value. It is easy to use with high precision.
- HVS-10Z series is equipped with auto-turret, Halogen Light-source and Built-in Mini-printer as the standard delivery.
- HVS-10Z series is a full digital hardness testing instrument, don't need operator to read the length of diagonal, just press the sensor key.

### Specifications:

Product Name		Practical Auto-Turret Digital Vickers Hardness Tester		
Model		HVS-10Z	HVS-30Z	HVS-50Z
Code#		821-142	821-152	821-162
Testing Force	Kgf	0.3, 0.5, 1, 3, 5, 10	1, 3, 5, 10, 20, 30	1, 5, 10, 20, 30, 50
	N	2.94, 4.9, 9.8, 29.4, 49.0, 98.0	9.8, 29.4, 49.0, 98.0, 196, 294	9.8, 49.0, 98.0, 196, 294, 490
Testing Range		8HV0.3—2900HV10	8HV0.5—2900HV30	8HV1—2900HV50
Lens& Indenter Switch		Auto-turret		
Loading Control		Automatic (Loading, Dwell, Unloading)		
Magnification of Microscope		Observation:10x; Measurement:20x	Observation:10x; Measurement:10x	
Digital Eyepiece		Magnification:10x		
Dwell Time		Adjustable 5～60s		
Auto Hardness Conversion		HR; HB; HK; etc		
Output Data		RS232/Mini-Printer		
Hardness Indication		LCD Display		
Illumination		Adjustable LED		
Max. Height of Specimen		160mm		
Instrument Throat		135mm		
Power Supply		AC220V/50Hz;110V/60Hz		
Dimension(LxWxH)		535 x225 x580mm		
Packing Dimension		630 x460 x710mm		
Gross/Net Weight		75Kg/55Kg		
Execution Standard		GB/T4340.2, EN-ISO6507, ASTM E10-08, ASTM E-384		



HVS-10Z(#821-142)  
HVS-30Z(#821-152)  
HVS-50Z(#821-162)

### Standard Delivery:

Standard Delivery	Code#
Vickers Indenter	821-402
HV5 Hardness Block	821-612
HV30 Hardness Block	821-642
10x Digital Eyepiece	821-342
Objectives 10x	825-312
V-Shape Anvil	821-522
55mm Flat Anvil	821-562
Mini-Printer	821-832
Power Cable	821-802
Accessories Box	821-902
Anti-dust Cover	821-912
Level Screw	821-932
Instrument Manual	HVS-10Z/30Z/50Z



# Advanced Digital Macro Vickers Hardness Tester

## HV-10AC series

### Characteristic:

- HV-10AC Series is a half automatic and intelligent Vickers hardness testing machine, it adopts the close-loop force sensor to replace the traditional quality weight, this innovative design makes the instrument more accurate.
- HV-10AC Series selection of testing force and dwell time is controlled and monitored on the front panel, it is automatic during the process of loading, dwell and unloading.
- HV-10AC Series adopts digital microscopes with adjustable LED illuminator, no need the operator to read the detail length of indentation, it only needs the operator to aim the D1, D2 diameter of indentation and press the length key twice, then the built-in computer can computer the Vickers scale.
- HV-10AC Series equipped with a large LCD screen, the operation is more directly and clearly.
- HV-10AC Series doesn't need the operator to read the diagonal of indentation and check the Vickers testing table, it improves the testing speed and accuracy of hardness testing obviously.
- HV-10AC series hardness conversion among 17 hardness scales, and linking to PC in RS 232 interface and cable.

### Specifications:

Product Name		Advanced Auto-Turret Digital Vickers Hardness Tester		
Model		HV-10AC	HV-30AC	HV-50AC
Code#		821-171	821-181	821-191
Testing Force	Kgf	0.3, 0.5, 1, 2, 2.5, 3, 5, 10	0.5, 1, 2, 3, 5, 10, 20, 30	1, 2, 3, 5, 10, 20, 30, 50
	N	2.94, 4.9, 9.8, 19.6, 24.5, 29.4, 49.0, 98.0	4.9, 9.8, 19.6, 29.4, 49, 98, 196, 294	9.8, 19.6, 29.4, 49.0, 98.0, 196, 294, 490
Testing Range		8HV0.3~2900HV10	8HV0.5~2900HV30	8HV1~2900HV50
Lens& Indenter Switch		Auto-turret		
Loading Control		Automatic (Loading, Dwell, Unloading)		
Magnification of Microscope		Observation:10x; Measurement:20x		
Digital Eyepiece		Magnification:10x;		
Dwell Time		Adjustable 0~60s		
Auto Hardness Conversion		HRA、HRB、HRC、HV、HK、HBW、etc		
Hardness Indication		LCD Display		
Output Data		RS232/Mini-printer		
Illumination		Adjustable LED		
Max. Height of Specimen		160mm		
Instrument Throat		135mm		
Power Supply		AC220V/50Hz;110V/60Hz		
Dimension(LxWxH)		535 x225 x580mm		
Packing Dimension		630 x460 x710mm		
Gross/Net Weight		75Kg/55Kg		
Execution Standard		GB/T4340.2, EN-ISO6507, ASTM E10-08, ASTM E-384		



HV-10AC(#821-171)  
HV-30AC(#821-181)  
HV-50AC(#821-191)

### Standard Delivery:

Standard Delivery	Code#
Vickers Indenter	821-401
Built-in 10x Objective	821-311
Built-in 20x Objective	821-321
HV1 Hardness Block	821-601
HV10 Hardness Block	821-631
10x Digital Eyepiece	821-341
V-Shape Anvil	821-521
Mini-Printer	821-831
Power Cable	821-801
Accessories Box	821-901
Anti-dust Cover	821-911
Level Screw	821-931
Instrument Manual	HV-10AC/30AC/50AC



# Automatic Macro Vickers Hardness Tester Vexus ZHV-30AZ series

## Characteristic:

- Vexus ZHV-30/50AZ mainly equips with precision force loading/unloading system, auto-turret, LCD display and panel, CCD adapter and camera, PC system, auto-platform and auto-controlling-measuring-software MV1000.
- Vexus ZHV-30/50AZ has two-kind of measuring model, one is by main instrument, it is traditional measurement operation; another is by software. By Vickers measuring software MV1000, all of the operation is by computer except the focus-finding manually, which makes the operational step of hardness testing much ease and simple. Most of important, the auto-software MV1000 avoids the human-error and improves the accuracy of measurement.

## Specifications:

Product Name		Auto Macro Intelligent Vickers Hardness Tester	
Model		Vexus ZHV-30AZ	Vexus ZHV-50AZ
Code#		821-213	821-223
Testing Force	Kgf	0.3, 0.5, 1, 3, 5, 10, 20, 30	1, 2, 3, 5, 10, 20, 30, 50
	N	2.94, 4.90, 9.80, 29.4, 49.0, 98.0, 196.1, 294.2	9.80, 19.61, 49.0, 98.0, 196.1, 294.2, 490.3
Indentation Measurement		Digital Sensor /Software Measurement	
Auto-turret		Auto switch 10x, 20x lens & indenter	
Loading Control		Automatic (Loading, Dwell, Unloading)	
Magnification of Microscope		Observation:10x; Measurement:20x	
Digital Eyepiece		10X Digital Eyepiece	
Dwell Time		Adjustable 0~99s	
Auto Hardness Conversion		HV convert to HRC and HB	
Auto X-Y Anvil		Size:110x110mm;Travel:25mm; Resolution:1um	
Auto X/Y Anvil Movement		Motorized by PC measuring software MV1000	
Video System		1/3" B/W CCD Camera; 1X CCD Adapter	
Measuring Software		MV1000	
PC Communication		P4: 2.4G, 80G Memory, USB interface and PCI slot, RS232 port	
Max. Height of Specimen		220 mm	
Instrument Throat		160mm	
Illumination		Adjustable LED 6V Cold light-source	
Power Supply		AC220V/50Hz; 110V/60Hz	
Dimension(LxWxH)		260×560×680mm	
Packing Dimension		500x490x700mm	
Gross/Net Weight		80Kg/55Kg	
Execution Standard		GB/T4340.2, EN-ISO6507, ASTM E10-08, ASTM E-384	



Vexus ZHV-30AZ(#821-213)

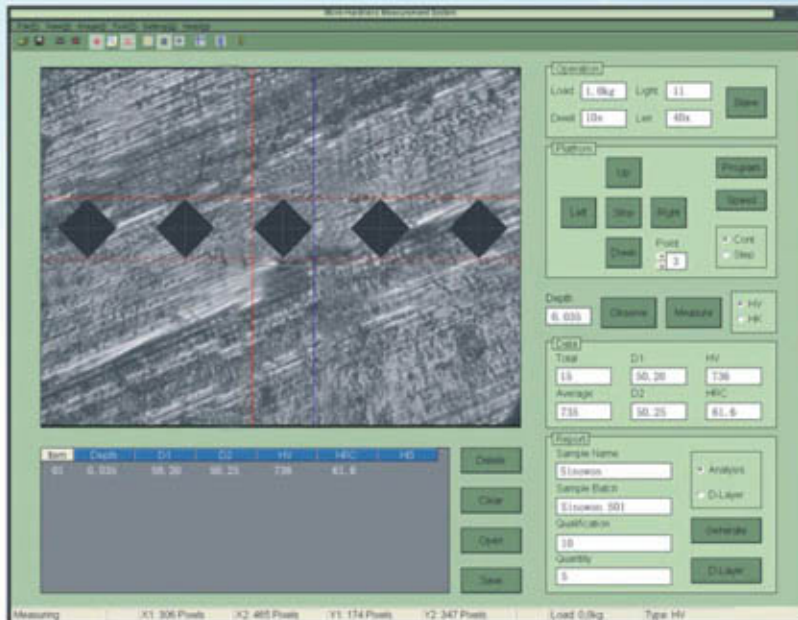
Vexus ZHV-50AZ(#821-223)

## Standard Delivery:

Standard Delivery	Code#
Vickers Indenter	821-403
HV1 Hardness Block	821-613
HV10 Hardness Block	821-623
10x Digital Eyepiece	821-343
Built-in 10X Objective	821-313
Built-in 20X Objective	821-313
Auto X-Y Anvil	821-703
Flat Precision Clamp	821-713
Measuring Software MV1000	823-383
HP 17"LCD Monitor	HP PC
1x CCD Adapter	821-363
1/3" CCD Camera	484-142
Power Cable	821-803
Accessories Box	821-903
Anti-dust Cover	821-913
Instrument Manual	Vexus ZHV-30AZ/50AZ



# Vickers Hardness Measuring and Driven Software MV1000



MV1000 (#823-383)

## Functions:

- Image display with pixel calibration.
- Operation: to setup the lens, loading/unloading, dwell time, brightness of light-source
- Platform-driven: to control the X,Y axis movement of electronic-platform in mode of "step" or "cont" automatically.
- Data process: display the length of indentation: D1, D2, HV/HV measurement, hardness conversation (HRC), average, etc.
- Report Output, delete, save: sample name, D1,D2, HV, HRC, HB, etc.
- Coating depth measurement available soon.

## Features:

- Turret Control by PC, including lens changed; light, loading etc.
- Image preview size: 768 x 576; Image measuring size: 1024 x 768;
- Two video input channel;
- Two hardness scale: HV & HK;
- Motor stage controller;
- HV-HRC conversion;
- Cylinder testing compensation
- Report generator.

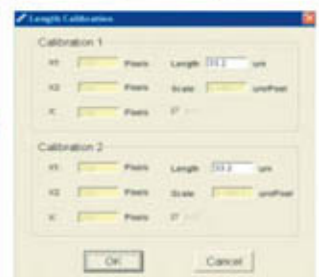
## Applications:

MV1000 is Vickers hardness measuring and driven software for auto-micro hardness tester or auto macro Vickers hardness tester.

It is applicable with the electronic-platform to make the fine linear hardness testing machine practically, and it eliminates the error of measurement maximally.

## Configuration:

- Hardware: P4: 2.4G, 80G Memory, USB interface and PCI slot, and RS232 port.
- Monitor resolution: 1024\* 768 (best); Screen color quality: 32"
- Operation system: Windows XP





# Portable Leeb Hardness Tester

Modern design, high-end, variant of the ML108/ML118/ML218 with additional features.  
Easy operating due to intuitive menu system.  
Fast, ML118 Composite built-in printer.  
ML108/ML218 Support Optional Built-out Mini-printer



ML108(#852-108)



ML118(#852-118)



ML218(#852-218)

## Specifications:

Product Name	Economic Leeb Hardness Tester	Practical Leeb Hardness Tester	Advanced Leeb Hardness Tester
Model	ML108	ML118	ML218
Code#	852-108	852-118	852-218
Measuring Rang	(170-960)HLD,(17-68.5)HRC,(19-651)HB,(80-976)HV,(30-100)HS,(59-85)HRA(13 -100)HRB		
Measuring Direction	0~360°		
Hardness Scale	HL)、HB、HRB、HRC、HRA、HV、HS		
Indicating Error	HLD:±5; HRC:±1; HB:±4		
Memory	100 Groups test maximum	100 Groups test maximum	500 Groups test maximum
Printer	Optional Printer	Built-in Printer	Optional Printer
DOS shell Material	Plastic	Plastic	Metal
Statistics	Average value, min-max ,upper-lower limits		
Data-Output	RS-232	USB1.0 to Hyperterminal (MS)	RS-232
Impact Device	D (standard)		
Optional impact Devices	DC/D+15/DL/G/C/E		
Dimension	148mm×72mm×30mm	212mm×72mm×30mm	131mm×75mm×31mm
Power Supply	AA3V	6V,500mA(1.8VA),A2.5-4 hours	AA3V
Operating Temperature	0℃ to 40℃		
Weight	220g (Excluding impact device and printer)		

# Optional Impact Devices



D(#852-418)

DC(#852-428)

DL(#852-438)

C(#852-448)

D+15(#852-458)

E(#852-468)

G(#852-478)

## Specifications:

Impact Device		D	DC	DL	C	D+15	E	G
Code#		852-418	852-428	852-438	852-448	852-458	852-468	852-478
Impacting Energy		11mJ	11mJ	11mJ	2.7mJ	11mJ	11mJ	90mJ
Weight of Impact Body		5.5g	5.5g	7.2g	7.8g	3.0g	5.5g	20g
Test tip Hardness		1600HV	1600HV	1600HV	1600HV	1600HV	1600HV	1600HV
Dia. Test tip		3mm	3mm	3mm	3mm	3mm	3mm	3mm
Material of Test Tip		Tungsten carbide						
Impact Body								
Diameter		20mm	20mm	20mm	20mm	20mm	20mm	30mm
Length		147mm	86mm	75mm	141mm	162mm	155mm	254mm
Weight		50g	50g	50g	75g	80g	80g	250g
Max. hardness of Sample		940HV	940HV	940HV	1000HV	940HV	1200HV	650HB
Average Roughness Ra		1.6μm	1.6μm	1.6μm	0.4μm	1.6μm	1.6μm	6.3μm
Min. weight of Sample								
Measurement Directly		>5kg	>5kg	>5kg	>1.5kg	>5kg	>5kg	>15kg
Need Support Firmly		2~5kg	2~5kg	0.5~1.5kg	2~5kg	2~5kg	2~5kg	5~15kg
Need Coupling Tightly		0.05~2kg	0.05~2kg	0.02~0.5kg	0.05~2kg	0.05~2kg	0.05~2kg	0.5~5kg
Min. thickness of Sample								
Coupling Tightly		5mm	5mm	5mm	1mm	5mm	5mm	10mm
hardening Layers		≥0.8mm	≥0.8mm	≥0.8mm	≥0.2mm	≥0.8mm	≥0.8mm	≥1.2mm
Indentation of Test tip								
Hardness 300HV	Diameter	0.54mm	0.54mm	0.54mm	0.38mm	0.54mm	0.54mm	1.03mm
	Depth	24μm	24μm	24μm	12μm	24μm	24μm	53μm
Hardness 600HV	Diameter	0.45mm	0.45mm	0.45mm	0.32mm	0.45mm	0.45mm	0.90mm
	Depth	17μm	17μm	17μm	8μm	17μm	17μm	41μm
Hardness 800HV	Diameter	0.35mm	0.35mm	0.35mm	0.30mm	0.35mm	0.35mm	
	Depth	10μm	10μm	10μm	7μm	10μm	10μm	
Error and Repeatability of Displayed Value								
Hardness Value		760±30HLD 530±40HLD	760±30HLDC 530±40HLDC	878±30HLDL 736±40HLDL	822±30HLC 590±40HLC	766±30HLD+15 544±40HLD+15	725±30HLE 508±40HLE	590±40HLG 500±40HLG
Error of Value		±6/±10 HLD	±6/±10 HLDC	±12 HLDL	±12HLC	±12 HLD+15	±12HLE	±12 HLG
Repeatability		6/10 HLD	6/10 HLDC	12 HLDL	12HLC	12 HLD+15	12HLE	12 HLG



# Optional Support Ring



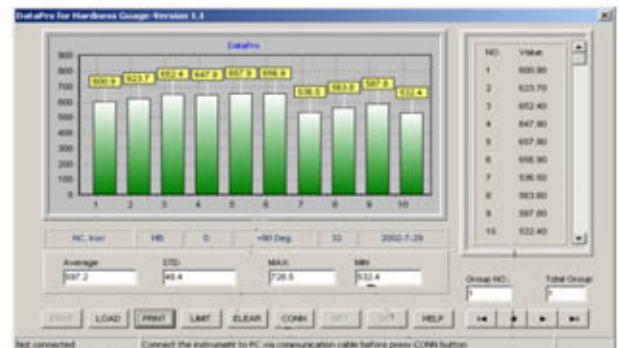
Optional Support Ring (#852-518)

## Specifications:

Product Name		Optional Support Ring
Code#		852-518
No.	Type	Remarks
1	K14.5-30	For testing spherical outside surface SR14.5~SR30
2	K10-15	For testing spherical outside surface SR10~SR15
3	HK16.5-30	For testing spherical inside surface SR16.5~SR30
4	HK12.5-17	For testing spherical inside surface SR12.5~SR17
5	HK11-13	For testing spherical inside surface SR11~SR13
6	Z10-15	For testing cylindrical outside surface R10~R15
7	Z14.5-30	For testing cylindrical outside surface R14.5~R30
8	Z25-50	For testing cylindrical outside surface R25~R50
9	HZ16.5-30	For testing cylindrical inside surface R16.5~R30
10	HZ12.5-17	For testing cylindrical inside surface R12.5~R17
11	HZ11-13	For testing cylindrical inside surface R11~R13
12	UN	For testing cylindrical outside surface, radius adjustable R10~∞

## Software Data Pro:

The software is a data processing software for Leeb hardness tester (ML1108, ML118, ML218), running in Microsoft Windows system. It can be connected to the instrument via communication port (USB or COM port), read the measured data stored in instrument memory, perform online configuration, transmit the measured data to PC, process the measurement data, display the visualized image, store the measurement data into database, load or remove the measurement data stored in database at any time, and output the measurement data to printer connected to computer.



# Analogue Shore Durometer



**Twin-index analogue shore Durometer  
LX-DT (#842-235)**



**single-index analogue shore Durometer  
LX-D (#842-135)**



**single-index analogue shore Durometer  
LX-A (#842-115)**

## Applications:

- Shore Durometer is designed to determine the indentation hardness of material ranging from cellular products to rigid plastics.
- LX-A/LX-AT Durometer is applicable to test the hardness of various rubber, elastomers and plastic products.
- LX-C/LX-CT Durometer is applicable to test the hardness of various rubber, elastomers and plastic products.
- LX-D/LX-DT Durometer is applicable to test the hardness of various rubber, elastomers and plastic products.
- The Durometer test stand is R&D for Shore A, C, and D Durometer. The test stand construction includes operating handle, adjusted glass stage, die poise, clip beam of Durometer and carrick column. The shore hardness testing will be more accurate with the stand.

## Specifications:

Product Name	Single-index Analogue Shore Durometer			Twin-index Analogue Shore Durometer		
Model	LX-A	LX-C	LX-D	LX-AT	LX-CT	LX-DT
Code#	842-115	842-125	842-135	842-215	842-225	842-235
Test Range	0-100 HA	0-100 HW	0-100 HD	0-100 HA	0-100 HW	0-100 HD
Available Test Range	10-90 HA	10-90 HW	10-90 HD	10-90 HA	10-90 HW	10-90 HD
Stroke	2.5 mm	2.5 mm	0~2.5 mm	2.5 mm	2.5 mm	0~2.5 mm
Tip Dimension	0.79mm	SR2.5mm	SR0.1mm	0.79mm	SR2.5mm	SR0.1mm
Dimension (LxWxH)	115x60x25mm	115x60x25mm	115x60x25mm	115x60x25mm	115x60x25mm	115x60x25mm
Net Weight	100g	100g	100g	100g	100g	100g
Execution Standard	GB/T531-1999, GB/T2489-93, ISO7619					



# Digital Shore Durometer MS-100 series



MS-100A(#842-216)



MS-100C(#842-226)



MS-100D(#842-236)

Product Name	Digital Shore Durometer		
Model	MS-100A	MS-100C	MS-100D
Code#	842-216	842-226	842-236
Measurement Range	0-100HA	0-100HW	0-100HD
Test Scale	Shore Hardness		
Standard	DIN53505, ASTM D2240, ISO7619, JISK7215		
Parameters	Hardness result, average value, maxes. value		
Measurement Deviation	< 1% H;		
Resolution	0.1		
Communication Interface	RS232C		
Operating Conditions	0°C to 40°C		
Power Supply	4x1.5V AAA (UM-4) battery,		
Switch	Auto switch off		
Battery Indicator	low battery indicator		
Dimensions	162x65x38mm		
Weight	173g (no probe)		
Standard Delivery	Instrument, test block, English manual and carrying case		

## Shore Durometer and Test Stand:

Product Name	Testing Stand		
Model	LX-AS	LX-CS	LX-DS
Code#	842-515	842-525	842-535
Dimension (LxWxH)	116 x 161 x 340mm	116 x 161 x 340mm	116 x 161 x 340mm
Weight of Durometer	About 1kg	About 1kg	About 1kg
Weight of Stand	About 5.5kg	About 5.5kg	About 5.5kg



LX-DS (#842-535)



# ultrasonic Hardness Tester UT-3A

## Applications:

Gears, bearings, metal coatings (such as nitrided steel, carburizing layer, plating layer, etc.), sheet metal, sheet metal, small, shaped workpiece, the large-sized workpiece which can not be moved, cylindrical firing pin, auto accessories, molds and other Hardness testing needed products can be made accurate detection;

## Characteristic:

- UT-3A is of high precision portable hardness tester, It adopts ZSC (dual-control compensation processing automatic identification system), It meets and higher than the national standard JB / T 9377-1999 requirements;
- Internal protection circuitry with strong anti external interference and protection ability.
- It mainly measuring metal Rockwell (HRC) hardness, the own conversion function can freely switch among different standard hardness: Brinell (HB), Rockwell (HRC), Vickers (HV);
- For different shapes, sizes and materials metal work piece, it doesn't need to replace the probe; For Different elastic modulus measured part or special materials, it only needs the same elastic modulus or material standard block to do standard test (adjustment) ;
- No damage on the tested work piece surface, good stability and wide measuring range;
- Built-in rechargeable battery, long standby time, to facilitate on-site operation without AC power;
- Self-test feature can check the failure between instrument and probe;
- It can do more seeking average cumulative to the work piece of hardness value unevenly distributed.
- Small New Probe made a significant change and greatly improved in the accuracy and durability aspects.
- The optional printer can do data output;
- It is small ,light , simple and easy to carry.

Product Name	Ultrasonic Hardness Tester
Model	UT-3A
Code#	882-111
Measuring Range	HRC 15-80 HB 100-550 HV 100-999
Display Accuracy	When Rockwell hardness displayed, precision 0.1HRC displayed in the whole measuring range
Measuring Accuracy	$\pm 1.0\text{HRC}$ (Meet and higher then national standard JB/T9377-1999 requirement)
Measuring Direction	Support 360° (Vertically downward, oblique, the level of the ramp, vertical upward)
Hardness Type	Brinell(HB )Rockwell(HRC ),Vickers(HV)
Min. size of Tester Object	5×5mm, thickness :0.1 above
Contact Pressure	Uniform contact pressure 8 - 20N $\pm$ 1N (Pressure can be deployed by the test conditions)
Probe Specification	136°Diamond pyramid
Power Supply	AC220V $\pm$ 10% 50/60HZ DC5V supplied by the built-in rechargeable battery
Recharge Time	5-hour
Dimensions	204×100×35mm
Net Weight	300g (host)
Standard Delivery	Shock proof cabinets (#882-901); Probe cable(#882-401); Charging Adapter(#882-911); Standard probe(#882-411); Standard block(#882-601)



Probe cable(#882-401)



# Portable Rockwell Durometer



PHR-2(#812-123)  
PHR-2S(#812-323)



PHR-100(#812-213)  
PHR-100X(#812-223)



PHR-4-3(#812-133)  
PHR-8-4(#812-163)  
PHR-8-10(#812-173)  
PHR-20-12(#812-183)



PHR-16(#812-413)  
PHR-32(#812-423)  
PHR-64(#812-433)



PHR-1(#812-113)  
PHR-1S(#812-313)



PHR-4-4(#812-143)  
PHR-4-2S(#812-333)



Accessories Box(#812-901)



carbide ball indenter

PHR series is a precisely portable hardness testing instrument for the measurement of metal and plastic material, it is not only suitable to measure the small parts, but also measure large parts, it not only offset the problem that bench top hardness tester can not move to test the large and fixed parts, but also offset the problem that the rebound hardness tester can not make a accurate testing for small parts.

Model	Code #	Specimen/Opening Size	Net Weight		Gross Weight		Package Dimensions	
			Tester	Bench Stand	Tester	Bench Stand	Tester	Bench Stand
PHR-1	812-113	25×25mm	0.8kg	1.5kg	2.8kg	1.8kg	330x255x150mm	215x148x232mm
PHR-2	812-123	50×50mm	1.2kg	1.5kg	3.7kg	1.8kg	390x280x160mm	215x148x232mm
PHR-4-2	812-133	100×50mm	1.5kg	4.5kg	5.2kg	4.9kg	510x177x375mm	215x148x232mm
PHR-4-4	812-143	100×100mm	2.5kg	4.5kg	6.1kg	4.9kg	510x177x375mm	215x148x232mm
PHR-4-3	812-153	100×75mm	2.2kg		8.5kg		510x375x177mm	
PHR-8-4	812-163	200×100mm	4.0kg		10.7kg		710x470x200mm	
PHR-8-10	812-173	200×250mm	5.5kg		14.2kg		720x650x230mm	
PHR-20-12	812-183	500×300mm	7.8kg		21.0kg		1020x760x240mm	
PHR-100	812-213	Flat surface>60x180mm Cylinder diameter>Φ100mm	4.9kg		10.0kg		480x390x210mm	
PHR-100x	812-223	Flat surface>20x180mm Cylinder diameter>Φ50mm	5.5kg		10.8kg		480x390x210mm	
PHR-1S	812-313	25×25mm	0.8kg	1.5kg	2.6kg	1.8kg	330x255x150mm	215x148x232mm
PHR-2S	812-323	50×50mm	1.1kg	1.5kg	3.6kg	1.8kg	390x280x160mm	215x148x232mm
PHR-4-2S	812-333	100×50mm	1.5kg	4.5kg	5.0kg	4.9kg	510x375x177mm	215x148x232mm
PHR-1ST	812-343	Dia>4.8mm	0.8kg	1.5kg	2.0kg	1.8kg	510x375x177mm	215x148x232mm
PHR-16	812-413	200x450mm	4.8kg		13.0kg		680×470×240mm	
PHR-32	812-423	400x850mm	6.8kg		15.0kg		680×470×240mm	
PHR-64	812-433	800x1600mm	11.5kg		23.0kg		1000×460×255mm	



# Portable Brinell Durometer MHB-3000



## Applications:

MHB-3000 is a portable Brinell hardness tester. It has a hydraulic system and the test force is applied by means of a handle.

MHB-3000 condition is applying 3000kg test force on a 10mm carbide indenter. It can result in permanent indentations for reinspection. The test condition meets the requirements of ISO 6506 and ASTM E110.



20X Measuring Microscope  
(With LED light) ( #832-213)

## Characteristic:

### On-site Testing

It is a portable instrument suitable to use in the plant. It is easy to operate and convenient to carry. So it can be used to easy test large work-pieces in any direction on site.

### Permanent Indentation

With 3000kg test force and 10mm ball indenter, the indentation can accurately reflect the true harness of cast iron, cast steel, forge piece, and other materials with coarse grain. The permanent indentation can be reinspected at any time after testing.

### Real Result

MHB-3000 has the same principle as the bench type Brinell hardness tester. So the result is totally different from the lossy conversion value of other portable hardness testers (eg. Rebound type hardness tester).

### Wide Testing Range

MHB-3000 has various test forces and two different ball indenters in order to test



MHB-3000(#832-113)

Product Name	Portable Brinell Durometer
Model	MHB-3000
Code#	832-113
Test Force	3000kg (500kg, 750kg, 1000kg, and 1500kg available)
Indenter	Φ10mm carbide ball indenter (Φ 5mm available)
Testing Range	100-650HBW (Expendable to 28-650HBW)
Max. Specimen Height	320mm
Throat Depth	100mm
Accuracy	Complies with ISO 6506
Repeatability	Complies with ISO 6506
Net Weight	13.8kg

Standard Delivery	Code#
Hardness Block HBW/3000/10 (150-250)	832-603
Hardness Block HBW/750/05 (75-150)	832-613
20X Measuring Microscope	832-213
Φ10mm Spare Carbide Ball Indenter	832-413
Hexagon Wrench	832-713
V-shaped Anvil	832-523
Flat Anvil	832-503
Hemispherical Anvil	832-533
Brinell Hardness Table	832-973



# Portable Brinell Durometer

## PHB-150 & PHB-1

### Applications:

- Accurate and consistent test force, controlled by precision shear pin. Works in static type and hammer impact type and follows Brinell hardness test method.
- According to the similarity principle of Brinell hardness test, this tester has 1580kg test force,  $\Phi 7.26\text{mm}$  spherical indenter,  $F/D^2=30$ . The test condition is equivalent to the commonly used 3000kg test force,  $\Phi 10\text{mm}$  ball condition.
- High accuracy and repeatability; tested by National Institute of Metrology with tolerance less than  $\pm 3\%$ . The accuracy meets the requirements of ISO 6506 and is no lower than that of the bench Brinell hardness tester.
- Easy, quick and simple operation. Static type for testing medium and small size work-pieces; hammer impact type for testing large work-pieces.
- Only one inexpensive shear pin is consumed in each test.
- Good choice to replace Leeb hardness tester and Poldi type hammer impact hardness tester with lower accuracy.

### Specifications:

Product Name	Dual-use Brinell Durometer	Hammer Impact Brinell Durometer
Model	PHB-150	PHB-1
Code#	832-123	832-145
Test Force	1580kg	
Tolerance of Test Force	< 0.5%	
Indenter	$\Phi 7.26\text{mm}$ steel spherical surface indenter, (test range: 100-400HB); $\Phi 4.0\text{mm}$ carbide spherical surface indenter, (test range: 400-650HB)	
Testing Range	100-650HB	
Application	Casting, forging and steel raw materials etc	
Accuracy	Meets the requirements of ISO6506 Error of static type: $< \pm 3\% \text{HB}$ Error of hammer impact type: $< \pm 5\% \text{HB}$	
Package Dimensions	705×375×205mm	510×375×177 mm
Gross/Net Weight	11.6Kg/4.2kg	3.8Kg/0.8kg



PHB-150(#832-123)



PHB-1(#832-145)

Standard Delivery	Code#
$\Phi 7.26\text{mm}$ Steel Indenter	832-453
20x Measuring Microscope	832-223
Brinell Test Block	832-603
Test Head	832-713
Flat-Anvil(PHB-150)	832-503
V-shape Anvil(PHB-150)	832-523
Indenter Head Holder	832-913
Shear Pins (250 pcs)	832-723
Accessories Box	821-903
2 rubber Protective Caps	821-813
Support Handle	821-923
Pin Removal Tool	821-933



# Portable Barcol Durometer BD-1

## Specifications:

Product Name	Portable Barcol Durometer
Model	BD-1
Code#	872-113
Indenter	26°panhead cone, head face diameter 0.176mm
Testing Range	0~100HBa, equivalent to 25~150HBW
Resolution	0.5HBa
Indication Error	hardness range 42~52HBa, ±2HBa hardness range 84~88HBa ±1HBa
Repeatability error	hardness range 42~52HBa, ±2HBa hardness range 84~88HBa ±1HBa
Net Weight	0.5kg
Standard Delivery	High value hardness block (#872-603) Low value hardness block(#872-613) Calibration wrench(#872-713) Accessories Box (#872-901) Spare indenters (#872-413)



BD-1(#872-113)

# Portable Webster Durometer W series

## Applications:

W-20,W-20A and W-20B are used to test aluminum profiles on the production site and application.

W-B75 Webster hardness tester is used to test brass tubings.

W-BB75 Webster hardness tester is used to test copper tubings.

W-B92 Webster hardness tester is used to test stainless steel sheets and cold-rolled steel sheets in the manufacturing plant



W-20(#862-113)

Model	W-20	W-20A	W-20B	W-B75	W-B75B	W-BB75	W-BB75B	W-B92
Code#	862-113	862-123	862-133	862-143	862-153	862-163	862-173	862-183
Measuring Scope	0~20HW							
Indication Error	0.5HW(5~17HW)							
Repeatability Error	0.5HW(5~17HW)							
Hardness Range	25~110HRE; 58~131HRV			63~105HRF		18~100HRE		50~92HRB
Application Range	Aluminum alloy			Brass		Copper		Stainless Steel Trips



# Accessories of Hardness Tester

## Hardness Block:

The hardness blocks are mainly applicable to test the accuracy and calibrate the different hardness testers. Hardness blocks are produced and provided in scale of Rockwell, Superficial Rockwell, Brinell, Vickers, Micro Vickers, Leeb and Hammer Brinell, etc.

Conform to standard: ASTM & ISO;

Calibration certificate from Chinese Metrology Bureau is optional available.



**Hardness Testing Block**

## Specification:

Hardness block	Technical Specification	Dimension
Rockwell	(28-88)HRA; (85-100)HRB; (20-33)HRC	Ø60x10mm
Superficial Rockwell	HR15N; HR30N; HR45N; HR15T; HR30T; HR45T	Ø60x10mm
Brinell	HBW 10/3000; HBW 5/750; HBW 10/1000; HBW 5/250	Ø90x15mm
	(150-600)HBW 2.5/187.5 (75-125)HBW 2.5/62.5	Ø64x12mm
	(150-500)HBW 5/750 (150-500)HBW 5/3000	12x12x15mm 14x14x15mm
Vickers	(150-750)HV5; (150-750)HV10; (150-750)HV30	Ø60x10mm
Micro Vickers	(200-300)HV0.05; (200-300)HV0.1; (300-400)HV0.15; (400-500)HV0.2; (700-800)HV0.2; (700-800)HV0.5; (700-800)HV1	Ø25x5mm
Leeb	(490-570)HLD; (590-670)HLD; (750-830)HLD	Ø90x55mm
Leeb G model	(460-540)HLG; (550-630)HLG	Ø120x70mm



**Cone Diamond Indenter**  
(#811-401)



**55mm V-shape anvil**  
(#811-511)



**35mm Flat anvil**  
(#811-521)



**150mm Flat anvil**  
(#811-541)



**10mm, 5mm, 2.5mm Brinell  
Ball Indenter**  
(#811-431/421/431)



**Mini-Printer**  
(#821-831)



**20x Brinell Digital Microscope**  
(#811-221)



**20x Brinell Mechanic Microscope**  
(#811-221)



**X-Y Anvil**  
(#823-701)



**Leeb Hardness Tester  
Optional Mini-printer**  
(#812-838)



**Optional Working Copboard**  
(#811-941)



# Optional Accessories of Hardness Tester



Indenter Protector  
(#411-491)



Ø1/16", Ø1/8", Ø1/4", Ø1/2"  
Rockwell Ball Indenter  
(#811-411/431/451/471)



Small Flat Anvil  
(#811-501)



100mm Flat Anvil  
(#811-531)



Flat Precision Clamp  
(#823-711)



Thin-piece Clamp  
(#823-751)



Filament Clamp  
(#823-761)



Unequal Specimen Clamp  
(#823-743)



Digital X-Y Anvil  
(#823-711)



16x Digital Eyepiece  
(#823-351)



Vickers Measuring Camera  
(#823-811)



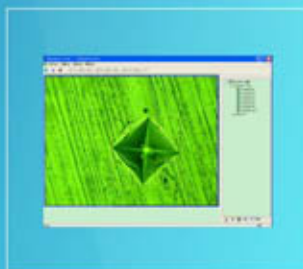
Vickers Display Monitor  
(#823-821)



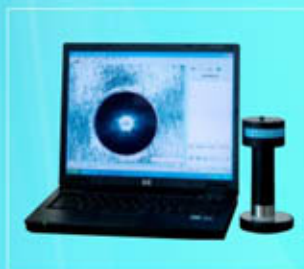
CCD Camera and Capture Card  
(#484-132/527-131)



Vickers CCD Adapter  
(#823-361)



Vickers Measuring Software  
(#823-381)



Brinell Measuring System  
(#831-341)

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