



## Bench Hardness Tester

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## Features

- High accuracy, wide measurement range, automatic loading and unloading of major load
- Test results display digitally, and can print automatically and connected to PC.
- High definition Matrix LCD display with back-light
- Optional indenters meet different test requirements: TH300 protruding indenter for ring and groove; TH310 for surface and TH320 for all kinds.
- Conversion of common hardness scales (HLD, HV, HB) & Conversion of Tensile Strength, up to 15 kinds of Rockwell hardness scales.
- Collect statistics includes values, mean value, Maximum, Minimum and Standard Deviation
- Round correction: cylinder and sphere surface
- Upper /lower limits pre-setting and sound alarm
- Comply with GB/T230.2, BS EN10109-2, ASTM E-18, ISO6508.2 and other applicable standards.
- Automatic test process
- RS 232/USB data output

## Typical application

- Researching institute
- National organization
- University
- Aerospace Industry
- Automobile industry
- Steel industry

# TH300/320

ROCKWELL HARDNESS TESTER



Protrudent design for testing in place difficult to reach



Assistant joist



Assistant support

Assistant joist and assistant support as shown below are designed to provide support for hardness testing of long, heavy and big work pieces.

# TH300/320

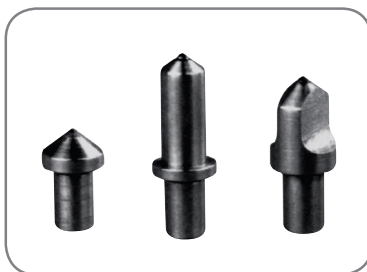
## ROCKWELL HARDNESS TESTER

### Technical Specification

Model	TH300	TH320
Hardness scales	Rockwell A, B, C,D,E,F, G, H, K ,L, M ,P, R, S, V	Rockwell A,B,C,D,E,F,G,H,K,L,M,P,R,S,V Rockwell superficial15/30/45N,T,W,X,Y
Resolution	0.1Rockwell unit	
Pre-load	98.07N/10kgf	98.07N/10kgf, 29.42N/3kgf
Total load	588.4N/60kgf, 980.7N/100kgf, 1471N/150kgf	588.4N/60kgf, 980.7N/100kgf, 1471N/150kgf, 147.1N/15kgf, 294.2N/30kgf, 441.3N/45kgf
Display	Matrix backlight LCD	
Language	English, French, Germany	English
Operation	Menu selectable, Membrane keypad	
Test process	Automatic	
Load duration	2-50 seconds, can be set, dynamic displayed and stored	
Functions	<ul style="list-style-type: none"> <li>● Upper / lower hardness limits setting and alarming</li> <li>● Data statistics : Ave., Max., Min., standard Deviation,</li> <li>● Convert tested values to HB, HV, HLD and <math>\delta_b</math> (Tensile-strength)</li> <li>● Curvature correction: cylinder and sphere surface</li> </ul>	<ul style="list-style-type: none"> <li>● Upper / lower hardness limits setting and alarming</li> <li>● Data statistics : Ave., Max., Min., standard Deviation,</li> <li>● convert tested values to HB, HV, HLD and <math>\delta_b</math> (Tensile-strength)</li> <li>● Curvature correction: cylinder and sphere surface</li> </ul>
Data output	RS232	
Tester standard	ISO6508.2 , ASTM E-18	
Testing space	Vertical: 250mm (9.85 " ) Horizontal:150mm (5.91 " )	Vertical: 250mm (8.66 " ) Horizontal:150mm (6.00 " )
Work piece size	External surface cylinder: Min.Ø3mm (0.120 " ) Internal surface cylinder: Min.Ø23mm (0.900 " )	
Power supply	220v/110v, 50Hz, 4A	
Dimensions (mm)	715×225×790	720×240×815
Weight (kg)	100	120



Large Vee anvil



Short diamond indenter  
Slim diamond indenter  
Flat diamond indenter



Point/Vee anvil



Flat/Vee anvil



Round flat anvil Ø70



Round flat anvil Ø225



Round flat anvil Ø150

## Standard Delivery

TH300	TH320
Main unit	Main unit
Test block B	Test block A, B, C
Test block C	Test block 15N
120° cone diamond indenter	Test block 30N
1/16" (1.5875mm) ball indenter	Test block 30T
1/16" (1.5875mm) spare ball	120° cone diamond indenter
Screw for indenter	1/16" (1.5875mm) ball indenter
Round flat anvil Ø70	1/16" (1.5875mm) spare ball
Large vee anvil	Screw for indenter
Power supply cable	Round flat anvil
Instruction manual	Large vee anvil
Warranty card	Power supply cable
	Instruction manual
	Warranty card

## Optional Accessory

- Mini-printer TA230
- Data communicating cable
- Short diamond indenter
- Flat diamond indenter
- Slim diamond indenter
- 1/8" (Ø3.175mm) indenter and spare ball
- 1/4" (Ø6.350mm) indenter and spare ball
- 1/2" (Ø12.70mm) indenter and spare ball
- Round flat anvil Ø225
- Round flat anvil Ø150
- Small vee anvil
- Flat /vee anvil
- Assistant support
- Assistant joist



### Features

- Rockwell hardness tester TH500 for mechanical project manual testing
- Practical economical solution, wide range measurement and simple operation.
- Wide usage range: hardened steel, the tempering steel, steel, steel rolling, annealing cold malleable iron, aluminum alloy, copper and so on.

### Usage Range

- Hardened steel, the tempering steel, steel, steel rolling, annealing cold malleable iron, aluminum alloy, copper and so on.

# TH500

ROCKWELL HARDNESS TESTER

### Optional Accessory

•Diamond rockwell indenter	1
•Hardness block(HRC high low 2, HRB 1)	3
•Weights(A,B,C)	Each 1
•Manual	1
•1.5875mm ball indenter	1
•Large, medium, "V" shaped testing table	Each 1
•Plastic dustproof cover	1
•Product certificate	1

### Technical Specification

Model	Model TH500 manual rockwell hardness tester
Indication of hardness value	Dial
Max height of specimen	170mm
Distance of indenter to outer wall	165m
Preliminary testing force	10kgf(98.07N)
Testing force	60kgf(588N) 100kgf(980N) 150kgf(1471N)
Rockwell scale	HRA,HRB,HRC,HRD,HRE,HRF,HRG, HRH,HRK
Hardness measuring range	HRA:20-88 HRB:20-100 HRC:20-70 HRD:40-77
	HRF:60-100 HRG:30-94 HRH:80- 100 HRK:40-100
Dimension (mm)	463×241×660
Weight (g)	80000

# TIME<sup>®</sup> 6101

## MOTORIZED ROCKWELL HARDNESS TESTER

### Features

- Driving motor with automatic loading and unloading technique
- High accuracy, reliable performance
- Wide usage range: hardened steel, the tempering steel, steel, steel rolling, annealing cold malleable iron, aluminum alloy, copper and so on.

### Usage Range

- Hardened steel, the tempering steel, steel, steel rolling, annealing cold malleable iron, aluminum alloy, copper and so on.

### Standard Delivery

•Diamond rockwell indenter	1 pc
•φ1.5875mm ball indenter	1 pc
•Testing table (big, medium, "V"-shaped)	TOTAL 3 pcs
•Standard rockwell hardness block	3 pc
•Fuse 2A	2 pcs
•Power cord	1 pc
•Weight A, weight B, weight C	TOTAL 3 pcs
•Level	1 pc
•Horizontal regulating screw	4 pcs
•Screwdriver	1 pc
•Solid spanner	1 pc
•Nylon anti-dust bag	1 pc
•Usage instruction manual	1 pc

### Technical Specification

The initial test force	98.07N (10kg); Tolerance: ± 2.0%	
The total test force	588.4N(60kg), 980.7N(100kg), 1471N(150Kg); Tolerance: ± 1.0%	
The power source	AC220V/110V, 50/60 Hz	
Time-delayed control	2-60 seconds, adjustable	
The max. height of the specimen	175 mm	
The distance from the indenter center to the instrument body	165mm	
The overall dimension of the tester:	525×210×730mm	
The net weight of the tester	78kg	



# TIME®6102

## DIGITAL ROCKWELL HARDNESS TESTER

### Features

- Large newly-designed displaying screen with good reliability, easy to operate and read
- Conversion of common hardness scales
- Transfer to PC for more further management, and connect to printer
- Conform to ISO6508-2 and ASTM E18 standards.

### Usage Range

- Hardened steel, the tempering steel, steel, steel rolling, annealing cold malleable iron, aluminum alloy, copper and so on.

The tester conforms to following standard:

ISO6508-2, metallic materials - rockwell hardness test - part 2: verification and calibration of testing machines

ASTM E18, standard test methods for rockwell hardness and rockwell superficial hardness of metallic materials.

### Standard Delivery

- |  |             |
|--|-------------|
| •Diamond rockwell indenter               | 1 pc        |
| • $\phi 1.5875$ mm ball indenter         | 1 pc        |
| •Testing table (big, meddle, "V"-shaped) | TOTAL 3 pcs |
| •Standard rockwell hardness block        | 3pc         |
| •Fuse 2A                                 | 2 pc        |
| •Power cable                             | 1 pc        |
| •Weight A,B,C                            | TOTAL 3 pcs |
| •Level                                   | 1 pc        |
| •Horizontal regulating screws            | 4 pcs       |
| •Screwdriver                             | 1 pc        |
| •Spanner                                 | 1 pc        |
| •Printer operating manual                | 1 pc        |
| Usage Instruction Manual                 | 1 pc        |



### Technical Specification

The initial test force	98.07N (10kg), Tolerance: $\pm 2.0\%$	
The total test force	588.4N(60kg), 980.7N(100kg), 1471N(150Kg); Tolerance: $\pm 1.0\%$	
The power source and the voltage	AC220V/110V, 50/60 Hz	
Time-delayed control	2-60 seconds, adjustable	
The max. height of the specimen	175 mm	
The distance from the indenter center to the instrument body	165mm	
The overall dimension of the tester:	520×215×700mm	
The net weight of the tester	78kg	



- ## Usage Range

- # TIME® 6103

## DIGITAL DOUBLE ROCKWELL HARDNESS TESTER

The power source and the voltage	AC220V/110V, 50/60 Hz
The distance from the indenter center to the instrument body	165mm
Dimension (mm)	551×260×800
Weight (g)	80000 (Approx)





## Features

- Combination of the precise mechanical structure, high accurate pressure transducer, microcomputer control unit of electrical circuit system, innovative closed-loop technology to improve its stability and accuracy.
- Load-cell driven system provides precise control of the test force, providing unsurpassed system performance without weight blocks
- Reliable repetition, sensitive and accurate readings and easy operation
- Perfect for laboratories, workshops, tool rooms, inspection labs, etc.
- A wide range of test forces and ball sizes to suit every application

# TIME® 6201

ELECTRONIC BRINELL  
HARDNESS TESTER

## Standard Delivery

• $\phi 2.5, \phi 5, \phi 10$ mm steel ball indenter	1pc(each)
• Big ,small plane testing table, “V” testing table	1pc(each)
• Standard hardness test block	
• HBW10/3000 (150~250)	1pc
• HBW5/750 (150~250)	1pc
• Spare fuse(2A)	2pcs
• Power cord	1pc
• Usage instruction manual	1copy
• 20 $\times$ reading microscope	1pc
• Dust-proof plastic bag	1pc
• Brinell hardness control table	1pc

## Technical Specification

Testing Force	612.9N(62.5kgf)	4900N(500kgf)
	980N(100kgf)	7355N(750kgf)
	1226N(125kgf)	9800N(1000kgf)
	1839N(187.5kgf)	14700N(1500kgf)
	2452N(250kgf)	29400N(3000kgf)
Hardness value range in measure		8~650HB
Enlargement factor of reading microscope		20times
Minimum division value of micrometer drum wheel		0.005mm
Maximum height of sample		220mm
Distance from indenter's center to outer wall		135mm
Power source		AC220V/110V, 50/60 Hz
Dimension (mm)		753×542×205
Weight (g)		130000



## Features

- Combination of the precise mechanical structure, high accurate pressure transducer, microcomputer control unit of electrical circuit system, innovative closed-loop technology to improve its stability and accuracy.
- Load-cell driven system provides precise control of the test force, providing unsurpassed system performance without weight blocks
- Reliable repetition, sensitive and accurate readings and easy operation
- Indentation directly measured by the microscope, the diameter, the hardness value, 17 different hardness testing comparison tables as well as the HBW range display on the LCD screen
- RS232 interface, printer optional
- Perfect for laboratories, workshops, tool rooms, inspection labs, etc.
- A wide range of test forces and ball sizes to suit every application

# TIME® 6202

DIGITAL BRINELL  
HARDNESS TESTER

## Standard Delivery

• $\phi 2.5, \phi 5, \phi 10$ mm ball indenter	1 for each diameter
•Large, small and V-type test stock	1 for each type
•Standard hardness block	
•HBW10/3000 150~250	1
•HBW5/750 150~250	1
•Fuse	2 (2A)
•Power cord	1
•Printer operation manual	1
•Quality certificate	1
•20 $\times$ microscopic ocular lens	1
•Plastic dust-proof cover	1
•Instruction manual	1

## Technical Specification

Testing force	612.9N(62.5kgf)	4900N(500kgf)
	980N(100kgf)	7355N(750kgf)
	1226N(125kgf)	9800N(1000kgf)
	1839N(187.5kgf)	14700N(1500kgf)
	2452N(250kgf)	29400N(3000kgf)
Applicable hardness range		8~650 HBW
Amplification of reading microscope		20 times
Minimum division value of micrometer drum wheel		0.00125mm
Maximum height of sample		225mm
Distance from indenter's center to instrument body		135mm
Voltage of power source		AC220V
Dimension (mm)		789 $\times$ 543 $\times$ 225
Weight (g)		130000



### Features

- Combination of the precise mechanical structure, high definition optical measuring system, CPU controlling test procedure and photoelectrical sensor technology for accurate result.
- The LCD screen shows measuring method, test force, diagonal length of indentation, hardness value, dwell time and the times of measurement.
- Presetting dwell time, Vickers or Knoop measuring method, light intensity, and easy operation with setting on the front panel
- Automatic calculation of the hardness value after inputting the diagonal length and automatic loading and unloading technique
- Equipped with hand turret for your convenience
- Conform to GB/T4340, ISO6507, JIS B7725 and ASTM E92 standards.

**TIME® 6301**  
DIGITAL MICRO VICKERS  
HARDNESS TESTER

### Standard Delivery

•Weights	6 pcs
•Weight axis	1 pc
•Cross testing table	1 pc
•Platelet fixture	1 pc
•Plane-holding fixture	1 pc
•Filament fixture	1 pc
•Screw drivers	2 pcs
•Horizontal regulating screws	4 pcs
•Level	1 pc
•Power cord	1 pc
•Repair fuses (1A)	2 pcs
•10×digital micro eyepiece	1 pc
•Vickers hardness blocks	2 pcs
•The USAGE instruction manual	1 pc

### Technical Specification

Testing range	1HV~2967HV
Test force	0.098N(10gf), 0.245N(25gf), 0.49N(50gf), 0.9807N(100gf), 1.961N(200gf), 2.942N(300gf), 4.903N(500gf), 9.807N(1000gf)
Max height of the specimen	100 mm
Distance between the center point of the indenter and the exterior panel	98 mm
Test force application method	automatic loading and unloading
Amplification of the microscope	400× (for the measurement)
	100× (for the observation)
Dwell time of the test force	0~60s (5 seconds as a unit)
Min graduation value of the testing drum wheel	0.25μm/grid
Power	AC220V/110V, 50/60 Hz
Dimension (mm)	480×305×545
Weight (g)	30000



### Features

- Unique and precise design in mechanics, optics and light source for clearer indentation and hence a more precise measurement.
- 20 × lens and a 40 × lens the tester enable a wider measurement field and a broader usage range.
- Equipped with a digital microscope, it shows the measuring method, test force, diagonal length of indentation, hardness value, dwell time and the times of measurement.
- TH711: equipped with auto turret to prevent maloperation.
- Automatic loading and unloading technique
- Conform to GB/T4340, ISO6507, JIS B7725 and ASTM E92 standards.

# TH710/711

DIGITAL MICRO VICKERS  
HARDNESS TESTER

### Standard Delivery

•Weights	6 pcs
•Weight axis	1 pc
•A cross testing table	1 pc
•A platelet fixture	1 pc
•A plane-holding fixture	1 pc
•A filament fixture	1 pc
•Screw drivers	2 pcs
•Horizontal regulation screws	4 pcs
•A level	1 pc
•An electric cave	1 pc
•Repair fuses (1A)	2 pcs
•An eyepiece	1 pc
•Vickers hardness blocks	2 pcs
•The usage instruction manual for the product	1 pc

### Technical Specification

Testing range		1HV~2967HV	
Test force		0.098N(10gf),0.245N(25gf),0.49N(50gf), 0.9807N(100gf),1.961N(200gf),2.942N(300gf), 4.903N(500gf),9.807N(1000gf)	
Optical system			
Carriage application method:		automatic loading and unloading	
Objective		10*(Observation)	40*(Measurement)
Measuring Eyepiece	10*		
Total Amplification	100*( Observation )		400*( Observation )
Resolution Rate	0.25μm		0.0625μm
Max height of the specimen		100 mm	
Distance between the point of the indenter and the exterior panel		98 mm	
Gross weight: 44kg		Net weight: 30 kg	
Power source		AC220V/110V, 60/50 Hz	
Dimension (mm)		480×305×545	



## Features

- New high-tech product with precise mechanical and photoelectrical technology
- 10 × lens and a 40 × lens the tester enable a wider measurement field and higher accuracy.
- Equipped with a digital microscope and cold light source, it shows the measuring method, test force, diagonal length of indentation, hardness value, dwell time and the times of measurement.
- Camera devices can be connected via RS232 interface
- Especially suitable for testing the hardness of small, thin and fragile material specimen
- Knoop indenter optional to measure knop hardness value
- Conform to GB/T4340, ISO6507, JIS B7725 and ASTM E92 standards.
- TH713: equipped with auto turret to prevent maloperation.

# TH712/713

DIGITAL MICRO VICKERS  
HARDNESS TESTER

## Standard Delivery

• Main unit	1	• Power cord	1
• Weights	6	• 10× numerical microscope	1
• Cross testing table	1	• Vickers hardness block	2
• Platelet fixture	1	• Repair fuses (1A)	2
• Plane-holding fixture	1	• Weight shaft	1
• Filament fixture	1	• Instruction manual	1
• Screw driver	2	• TIME certificate	1
• Horizontal regulation screw	4	• Warranty card	1
• Level	1		

## Optional Accessory

- Knoop indenter
- LCD device
- Grinding machine
- Cutting machine
- Mosaic machine

## Technical Specification

Test Forces	(0.098, 0.246, 0.49, 0.98, 1.96, 2.94, 4.90, 9.80) N(10, 25, 50, 100, 200, 300, 500, 1000) gf
Carriage Control	Loading / dwell/ unloading(automatic)
Amplification of the Microscope	100 ×, 400 ×
Dwell Time of the Test Force	(5-60)s
Min. Graduation Value of the Testing Drum Wheel	0.0625μm
Testing Field	1HV—2967HV
Dimension of the XY Table(mm)	100 × 100
Movement Field of the XY Table(mm)	25 × 25
Max. height of the specimen(mm)	70
Max. width of the specimen(mm)	95
Light source	Cold light source
Power Supply	110V/220V,60/50Hz
Dimensions(mm)	425 × 245 × 490





## Features

- Large LCD screen shows measuring method, test force, diagonal length of indentation, hardness value, dwell time and the times of measurement.
- Optional LCD devices (composed of CCD measuring device and LCD display screen)
- Especially suitable for testing the hardness of small, thin and fragile material specimen
- Knoop indenter optional to measure knop hardness value
- 10 × lens and a 40 × lens the tester enable a wider measurement field and higher accuracy.
- Testing result printable by built-in printer.
- TH 715: equipped with auto turret to prevent maloperation.
- TH 716: the test force can extend to 19.6N (2000gf)

# TH714/715/716

DIGITAL MICRO VICKERS  
HARDNESS TESTER

## Standard Delivery

• Main unit	1	• Power cord	1
• Weights	6	• 10×numerical microscope	1
• Cross testing table	1	• Vickers hardness blocks	2
• Platelet fixture	1	• Repair fuses (1A)	1
• Plane-holding fixture	1	• Cable for RS232 interface	1
• Filament fixture	1	• TIME certificate	1
• Screw drivers	2	• Warranty card	1
• Horizontal regulation screws	4	• Instruction manual	1
• Level	1		

## Optional Accessory

- Knoop indenter
- Grinding machine
- Cutting machine
- Mosaic machine
- LCD device

## Technical Specification

Test Forces	(0.098, 0.246, 0.49, 0.98, 1.96, 2.94, 4.90, 9.80) N(10, 25, 50, 100, 200, 300, 500, 1000) gf
Carriage Control: automatic	Loading / dwell/ unloading(automatic)
Amplification of the Microscope	100 ×, 400 ×
Dwell Time of the Test Force	(5-60)s
Min. Graduation Value of the Testing Drum Wheel	0.0625μm
Testing Field	1HV—2967HV
Dimensions of the XY Table(mm)	100 × 100
Movement Field of the XY Table(mm)	25 × 25
Max. height of the specimen(mm)	70
Max. width of the specimen(mm)	95
Light source	Cold light source
Power Supply	110V/220V,60/50Hz
Dimension(mm)	425 × 245 × 490
Net Weight(kg)	35



### Features

- 20 × lens and a 40 × lens the tester enable a wider measurement field and higher accuracy.
- Connected to printer and computer via RS232 interface.
- Easy operation: Auto turret
- The touch LCD screen shows measuring method, test force, diagonal length of indentation, hardness value, dwell time and the times of measurement.

# TH717

DIGITAL MICRO VICKERS  
HARDNESS TESTER

### Standard Delivery

•Weights	6 pcs
•A cross testing table	1 pc
•A platelet fixture	1 pc
•A plane-holding fixture	1 pc
•A filament fixture	1 pc
•Screw drivers	2 pcs
•Horizontal regulation screws	4 pcs
•A level	1 pc
•An electric cave	1 pc
•A 10×numerical microscope	1 pc
•Vickers hardness blocks	2 pcs
•Repair fuses (1A)	2 pcs
•The usage instruction manual for the product	1 pc

### Technical Specification

Testing range	1HV~2967HV	
Test force	0.098N(10gf),0.245N(25gf),0.49N(50gf), 0.9807N(100gf), 1.961N(200gf),2.942N(300gf), 4.903N(500gf),9.807N(1000gf)	
Optical system		
Carriage application method:		automatic loading and unloading
Objective	10*(Observation)	40*(Measurement )
Measuring eyepiece	10×	
Total amplification	100*(Observation)	400*(Measurement )
Resolution Rate	0.25μm	0.0625μm
Max height of the specimen		100 mm
Distance between the point of the indenter and the exterior panel		98 mm
Gross weight: 44kg		Net weight: 30 kg
Power		AC220V/110V, 60/50 Hz
Dimension (mm)		480×305×545



### Features

- New high-tech product with precise mechanical and photoelectrical technology
- Equipped with a digital microscope and cold light source, it shows the measuring method, test force, diagonal length of indentation, hardness value, dwell time and the times of measurement.
- Especially suitable for testing the hardness of small, thin and fragile material specimen
- Closed-loop control system: CPU control test force to load, dwell and unload, with high accurate pressure transducer sense feedback, the loss of test force automatically compensated.

# TH720/721

DIGITAL MICRO VICKERS  
HARDNESS TESTER

### Standard Delivery

• Largest test table	1	• 10×digital micro lens	1
• V shape test table	1	• Vickers hardness blocks	2
• Screw drivers	2	• Repair fuse(1A)	2
• Horizontal regulation screws	4	• TIME certificate	1
• Level	1	• Warranty card	1
• Power cord	1	• Instruction manual	1

### Optional Accessory

- CCD measuring device
- Knoop indenter(for TH720)

### Technical Specification

Type		TH720	TH721
Testing force	N	4.903, 9.807, 19.61, 24.52, 29.42, 49.03, 98.07, 196.1, 294.2	9.807, 19.61, 24.52, 29.42, 49.03, 98.07, 196.1, 294.2, 490.3
	KGF	0.5, 1, 2, 2.5, 3, 5, 10, 20, 30	1, 2, 2.5, 3, 5, 10, 20, 30, 50
Carriage Control		Loading/dwell /unloading(automatic)	
Dwell Time		(0~60)s	
Amplification of the microscope		100×、200×	100×、200×
Min. graduation value of the test drum wheel		0.125μm	
Testing field		1HV~2967HV	
Lens/Indenter switch		with Hand Turret	
Max. Height of the specimen		180mm	
Max. Width specimen		130mm	
Light source		Cold light source	
Power		110V/220V, 60/50HZ	
Dimensions(mm)		530×225×630	





## Features

- Suitable for testing the hardness of ferrous, non-ferrous metals, hard metals, carburized layers and chemical treating layers
- Versatile hardness tester for Brinell, Rockwell, Vickers testing
- Different kinds of testing force and indenter can be selected
- Adopt test force transformation framework and optical measuring instruction system
- Equipped with indentation measuring device

# TH722

UNIVERSAL HARDNESS TESTER

## Standard Delivery

•Diamond rockwell indenter	1
•Diamond vickers indenter	1
•1.5875mm ball indenter	1
•2.5mm ball indenter	1
•5mm ball indenter	1
•Testing table (big, small, "V")	1
•Standard rockwell hardness block (55~65HRC)	1
•Standard rockwell hardness block(25~35HRC)	1
•Standard rockwell hardness block(HRB)	1
•Standard brinell hardness block	1
•Standard vickers hardness block	1
•Weight 1	1
•Weight 2	1
•Weight 3	1
•Weight 4	1
•Weight 0#	1
•15× micrometer eyepiece	1
•2.5×objective	1
•5×objective	1
•Power cord	1
•Fuse	1
•Lamp 6V,21CP	1
•Lamp 6V,15W	1
•Baffle testing table	1
•Inner lamp head	1
•TIME certificate	1
•Warranty card	1
•Instruction manual	1

## Technical Specification

Pre- test force(N)	98
Rockwell test force(N)	588,980,1471
Brinell test force (N)	306,613,1839
Vickers test force(N)	294,588,980
Magnification of microscope	37.5×,75×
Max. height of specimens(mm)	180
Distance from indenter's center to outer wall(mm)	200
Machine size(D×W×H) (mm)	560×260×760
Power	AC220V/50Hz
Weght (g)	90000



### Features

- New high-tech product with precise mechanical and photoelectrical technology.
- Equipped with a digital microscope, directly display the measuring method, test force, indentation length, hardness value, dwell time of test force and etc.
- Especially suitable for testing the hardness of small, thin, fragile material specimen.
- Closed-loop control system :CPU control test force to load, dwell and unload, with high accurate pressure transducer sense feedback, the loss of test force automatically compensated.

# TH723/724

DIGITAL VICKERS  
HARDNESS TESTER

### Standard Delivery

•Screw drivers	2	•10×digital micro lens	1
•Horizontal regulation screws	4	•Vickers hardness blocks	2
•Level	1	•Repair fuse(1A)	2
•Power cord	1	•TIME certificate	1
•Cross testing table	1	•Warranty card	1
		•Instruction manual	1

### Optional Accessory

- CCD measuring device

### Technical Specification

Type		TH723	TH724
Testing force	N	2.942N, 4.903N, 9.807N, 19.61N, 24.52N, 29.42N, 49.03N	2.942N, 4.903N, 9.807N, 19.61N, 24.52N, 29.42N, 49.03N, 98.07N
	KGF	0.3 kg, 0.5kg, 1kg, 2kg, 2.5kg, 3kg, 5kg	0.3 kg, 0.5kg, 1kg, 2kg, 2.5kg, 3kg, 5kg, 10kg
Carriage Control		Loading/dwell /unloading(automatic)	
Dwell Time		(0~60)s	
Amplification of the microscope		200 <sup>×</sup> 、400 <sup>×</sup>	100 <sup>×</sup> 、400 <sup>×</sup>
Min. graduation value of the test drum wheel		0.125μm 0.0625μm	0.25μm 0.0625μm
Testing field		1HV~2967HV	
Lens/Indenter switch		with Hand Turret	
Max. Height of the specimen		180mm	
Max. Width specimen		130mm	
Light source		Cold light source	
Power		110V/220V, 60/50HZ	
Dimensions(mm)		530×225×630	



### Features

- Big LCD display shows stable and accurate results
- Digital versatile hardness tester for Brinell, Rockwell, Vickers testing
- Conversion among different hardness scales
- Selection of dwell time and setting of time and date
- Storage and printing function
- RS232 interface for optional functions

# TH725

DIGITAL UNIVERSAL  
HARDNESS TESTER

### Rockwell Hardness

Specifications of rockwell hardness				
Testing force(N)	Initial testing force	98.07(10kg)		Tolerance ±2.0%
	total testing force	588.4(60kg)		Tolerance ±1.0%
		980.7(100kg)		
		1471(150kg)		
Indenter	Diamond cone indenter			
	Φ1.5875mm ball indenter			
Scales	HRA	HRB	HRC	HRD
Max height of samples	175mm			

### The technical specification of brinell hardness tester

Testing force	294.2N(30kg)		Tolerance ±1.0%
	306.5N(31.25kg)		
	612.9N(62.5kg)		
	980.7N(100kg)		
	1839N(187.5kg)		
Indenter	φ2.5mm、φ5mm Ball Indenter		
Scales	HBW1/30	HBW2.5/31.25	HBW2.5/62.5
	HBW5/62.5	HBW10/100	HBW2.5/187.5
Eyepiece magnification	15*		
Objective	2.5*(resolution 0.5μm)		
	5*(resolution 0.25μm)		
Max height of sample	For 2.5*: max height is 95mm		
	For 5*: max height is 115mm		

### Vickers Hardness

Technical specifications of vickers hardness		
Test force	294.2N(30kg)	Tolerance ±1.0%
	980.7N(100kg)	
Indenter	Diamond vickers indenter	
Scale	HV30	HV100
Eyepiece magnification	15×	
Objective magnification	5*(Resolution 0.25μm)	
Max. height of specimen	115mm	

## Technical Specification

The power source and the voltage	AC220V/110V, 50/60 Hz
Time-delayed control	0-60 seconds, adjustable
The distance from the Indenter center to the instrument body	165mm
Overall dimension (length×width×height)	551×260×800 mm
The net weight of the tester	80kg (Approx)

## Accessories ( Packing list )

Accessories kit of main body		
No.	Description of goods	Quantity
1	Diamond cone rockwell indenter	1pc
2	φ1.5875mm steel ball indenter	1pc
3	Large testing table	1pc
4	Medium testing table	1pc
5	"V" shaped testing table	1pc
6	0、1、2、3、4 weight	Total 5-pcs
7	Standard hardness block HRC ( high, lower)	Total 2 pcs
8	Standard hardness block HRB	1 pc
9	Level bolt	4-pcs
10	spanner	1-pc
11	Power cable	1-pc
13	Instruction manual	1-copy
14	Quality certificate	1-copy
15	Plastic Anti-dust Bag	1-pc

Accessories kit of microscope			
No.	Description of goods		Quantity
1	Digital eyepiece		1pc
2	Seat of microscope	in harness	1pc
3	Outside light		1pc
4	Inside light		1pc
5	2.5× objective		1pc
6	5× objective		1pc
7	Slipped testing table		1pc
8	Diamond vickers indenter		1-pc
9	φ2.5mm, φ5mm ball indenter		2-pcs
10	Standard vickers hardness block(HV30)		1-pc
11	Standard brinell hardness block (HBW/2.5/187.5)		1-pc
12	Gradienter		1-pc
13	Fuse 2A		2-pcs