A

Portable Hardness Tester

TIME®5300

PORTABLE HARDNESS TESTER

Standard Delivery

●Main unit	1
●Impact device type D	1
●Test block HLD	1
●Small support ring	1
●Cleaning brush	1
●Charger	1
●TIME certificate	1
●Warranty card	1
●Instruction manual	1

Optional Accessory

●Printing paper
●Special impact devices
●Support rings

Features

●Simple menu, easy and convenient to use
●Conversion of common hardness scales (HL, HV, HB, HRC, HRB, and HS) & Conversion of Tensile Strength
●Screen display showing all the important values and information (including values, mean value(MEAN), numbers of measuring(NO.),date, impact direction, materials tested, hardness values and so on)
●7 types of Optional Impact Devices, with auto recognition, universal standard D type included
●High accuracy and wide range options for testing(: including Steel and Cast steel, Forged Steel, Cold Work Tool Steel, Stainless Steel, Gray Cast Iron, Nodular Cast Iron, Cast Aluminum Alloys, Brass (Copper-zinc alloys), Bronze (copper-aluminum/ copper-tin alloys), Wrought Copper Alloys)
●Measuring Direction:Any direction 360° even with probe pointing up
●Indication for charge and easy change for rechargeable battery
●Printer included and test values can be printed directly
●Software calibration
●Auto power off

Technical Specification

Measuring range	(170-960)HLD (17.9-69.5)HRC see page 13
Hardness scale	HL, HB, HRB, HRC, HV, HS
Measuring direction	360°
Tolerance	±6HLD(when HLD=760±30) see page 14
Repeatability	6HLD(when HLD=760±30)
Diameter for printer paper	40mm
Width for printer paper	44.5±0.5mm
Power	12V/600mA
Charging time	2-3.5 hour
Humidity	≤90%
Operating temperature	0℃~40℃
Dimensions (mm)	235×90×47
Weight (g)	615

TIME®5301

PORTABLE HARDNESS TESTER

Standard Delivery

●Main unit	1
●Impact device type D	1
●Cleaning brush	1
●Small support ring	1
●Test block HLD	1
●Charger	1
●TIME certificate	1
●Warranty card	1
●Instruction manual	1

Optional Accessory

●Printing paper
●Special impact devices
●Support rings

Features

●Simple menu, easy and convenient to use
●Conversion of common hardness scales (HL, HV, HB, HRC, HRB, HRAand HS) & Conversion to Tensile Strength
●7 types of optional impact devices, with auto recognition. Universal standard D type included
●Matrix LCD display with back-light showing all the important values and information
●Memory of 48-350 groups of data
●Upper /lower limits pre-setting and sound alarm
●RS232 connector meets more needs like storage and further analysis
●Indication for charge and easy change for rechargeable battery
●Printer included and test values can be printed directly

Technical Specification

Measuring range	(170-960) HLD (17.9-69.5) HRC see page 13
Hardness scale	HL,HB, HRA, HRB, HRC, HV, HS
Measuring direction	360º
Tolerance	±6HLD (when HLD=760±30) see page 14
Repeatability	6HLD (when HLD=760±30)
Diameter for printer paper	40 mm
Width for printer paper	44.5±0.5 mm
Power	12V/600mA
Charging time	2-3.5 hour
Humidity	≤90%
Operating temperature	0℃-40℃
Dimensions (mm)	234x88x46
Weight (g)	600

TIME®5302

PORTABLE HARDNESS TESTER

Standard Delivery

●Main unit	1
●Impact device type D	1
●Test block HLD	1
●Charger	1
●Cleaning brush	1
●Table support for main unit	1
●Connecting cable	1
●TIME certificate	1
●Warranty card	1
●Instruction manual	1

Optional Accessory

●Printing paper
●Special impact devices
●Support rings
●Dataview software

Features

●Simple menu, easy and convenient to use
●Conversion of common hardness scales (HL, HV, HB, HRC, HRB, HRA and HS) & Conversion to Tensile Strength
●7 types of optional impact devices, with auto recognition. Universal standard impact device D included.
●Matrix LCD display with back-light showing all the important values and information
●Memory of 48-350 groups of data
●Measuring Direction:Any direction 360° even with probe pointing up
●Upper /lower limits setting and sound alarm
●Dataview Software as optional accessory
●Indication for charge and easy change for rechargeable battery
●Removable printer included and test values can be printed directly

Technical Specification

Hardness scale	HL, HRC, HRB, HRA, HV, HB, HS
Memory	group(Impact times:32-1)
Measuring range	see page 13
Tolerance	see page 14
Tensile strength U.T.S. range	374~2652 MPa
Standard impact device	D
Optional impact devices	DC/D+15/G/C/DL
Min. Radius of workpiece (convex/concave)	Rmin = 50mm (with special support ring Rmin= 10mm)
Max. workpiece hardness	see page 14
Min. workpiece weight	
Min. workpiece thickness	
Min. thickness of hardened layers	
Power	Rechargeable NiMH Battery,5×1.2V 600mAh
Continuous working time	About 50h (without printing and backlight)
Charging time	2~3.5 hours
Operating temperature	0~40℃
Humidity	90%
Dimensions (mm)	268×86×50
Weight (g)	530 (including impact device and printer)

TIME®5303

PORTABLE HARDNESS TESTER

Standard Delivery

●Main unit	1
●Impact device type D	1
●Test block HLD	1
●Charger	1
●Cleaning brush	1
●Table support for main unit	1
●Connecting cable	1
●TIME certificate	1
●Warranty card	1
●Instruction manual	1

Optional Accessory

●Printing paper
●Special impact devices
●Support rings
●Dataview software

Features

●Special system design for roller: one for roller exclusive and another for non- roller hardness testing
●Conversion of common hardness scales (HL, HV, HB, HRC, HRB, HRA and HS)
●7 types of optional impact devices, with auto recognition. Universal standard impact device D included.
●Matrix LCD display with back-light showing all the important values and information
●Memory of 48-350 groups of data
●Upper /lower limits setting and sound alarm
●RS232 interface for further management
●Software calibration
●Connected to printer and test values can be printed directly
●Conform to JB/T 9378-2001, Q/HD SDF006-2003 Standards.

Technical Specification

Measuring range	(30-110) HSD HLD see page 13
Hardness scale	HL,HB, HRA, HRB, HRC, HV, HS
Measuring direction	360°
Tolerance	±6HLD (when HLD=760±30) see page 14
Repeatability	6HLD (when HLD=760±30) see page 14
Power	12V/600mA
Charging time	2 hours (with over-charged protection)
Operating temperature	0°C-40°C
Dimensions (mm)	270x86x47
Weight (g)	530 (including main unit and printer)
Interface	RS 232

Features

- Advanced micro-electronic technology for wide range metal hardness test
- Simple menu, easy and convenient to use
- Conversion of common hardness scales (HL, HV, HB, HRC, HRB, HRA and HS) & Conversion to Tensile Strength
- 7 types of optional impact devices, with auto recognition. Universal standard impact device D included.
- 2.8 inches TFT LCD screen, 240 X 320 dot Matrix, 262K color display with adjustable back-light showing all the important values and information
- Memory of 1000 groups of data
- Upper /lower limits setting and sound alarm
- Transfer to PC via USB in Word & Excel format , with Powerful PC Software included
- Indication for charge and life-long rechargeable Li battery without memory
- Removable printer optional and test values can be printed directly
- Built-in conversion table and HB value can be read directly if D/DC impact device installed

TIME®5310

PORTABLE HARDNESS TESTER

Standard Delivery

- Main unit
- Impact device type D
- Test block HLD
- Small support ring
- Charger
- Cleaning brush
- Thermal printer paper
- TIME certificate
- Warranty card
- Instruction manual

Optional Accessory

- Impact device: DC, D+15, C, G, DL
- Support rings
- Dataview

Technical Specification

Measuring range	(170-960)HLD see page 13
Tolerance and repeatability	tolerance: ±6HLD (790±40HLD) repeatability: 6HLD (790±40HLD)
Measuring direction	360 °
Hardness scale	HL, HB, HRA,HRB, HRC, HV, HS
Display	2.8 inch TFT LCD screen, 240 x 320 dot matrix, 262K color display
Data storage	1000 groups of data
Upper and lower limits setting	(170-960)HLD
Working voltage	3.7V
Charging time	6 hours
Power	12V/500mA
Continuous working time	20 hours
Interface	USB2.0

TIME®5330

PORTABLE HARDNESS TESTER

Features

- ●Simple menu with instruction, easy and convenient to use
- ●Conversion of common hardness scales (HL, HV, HB, HRC, HRB, HRA and HS) & Conversion to Tensile Strength
- ●7 types of optional impact devices, with auto recognition. Universal standard impact device D included.
- ●4.3 inches TFT LCD screen, 480 X 272 dot Matrix, 24 bits true color display
- ●Memory of 2000 groups of data
- ●Upper /lower limits setting and sound alarm
- ●Transfer to PC via USB or RS232 in Word & Excel format , with Powerful PC Software included
- ●Indication for charge and life-long rechargeable battery without memory
- ●Removable printer optional and test values can be printed directly
- ●Built-in conversion table and HB value can be read directly if D/DC impact devices installed

Technical Specification

Measuring range	(170~960)HLD see page 13
Measuring direction	360°
Hardness scales	HL, HB, HRA,HRB,HRC,HV,HS
Display	4.3 inch AMOLED screen, 480×272 dot matrix, 24 bits true color display
Data storage	2000 groups
Upper and Lower limits setting	(170~960)HLD
Working voltage	3.7V
Charging time	Approx 6 hours
Power	12V/500mA
Continuous working time	Approx 12 hours
Interface	RS232 and USB

TIME®5350

PORTABLE HARDNESS TESTER

Standard Delivery

- ●Main unit
- ●Impact device type D
- ●Test block HLD
- ●Small support ring
- ●Charger
- ●Cleaning brush
- ●MicroSD card
- ●Communication cable
- ●TIME certificate
- ●Warranty card
- ●Instruction manual

Features

- ●Simple menu with instruction, easy and convenient to use
- ●Conversion of common hardness scales (HL, HV, HB, HRC, HRB, and HS) & Conversion to Tensile Strength
- ●7 types of optional impact devices, with auto recognition. Universal standard impact device D included.
- ●3.5 inches 320 X 480 dot Matrix LCD screen shows sufficient info with clear image; three different levels of backlight ,meet different situation needs
- ●Memory of 200 groups of data , including the information of the one-time value, average value, date, impact direction, measuring times, material and hardness scales.
- ●Upper /lower limits setting and sound alarm
- ●Transfer to PC via USB or RS232 in Word & Excel format , with Powerful PC Software included
- ●Maximum 32GB capacity MicroSD card can be used to store measured
- ●Removable printer optional and test values can be printed directly
- ●Built-in conversion table and HB value can be read directly if D/DC impact devices installed
- ●Software calibration function

Technical Specification

Measuring range	(170-960)HLD see page 13
Hardness scale	HL,HB,HRB,HRC,HV, HS
Measuring direction	360°
Tolerance	±6HLD(when HLD=760) see page 14
Repeatability	6HLD(when HLD=760)
Power	5V/500mA
Charging time	5 hour
Humidity	≤90%
Operating temperature	0℃~40℃
Dimensions (mm)	149×82×23
Weight (g)	200

TIME®5100/5102/5104

PORTABLE HARDNESS TESTER

Standard Delivery

●Main unit	1
●Test block HLD	1
●USB connecting cable	1
●Cleaning brush	1
●Battery AAA 1.5V	2
●TIME certificate	1
●Warranty card	1
●Instruction manual	1

Optional Accessory

●Support rings

●Dataview software

Features

●Light Mini Unit with simple menu, easy and convenient to use

●Conversion of hardness scales(HL, HV, HB, HRC, HRB and HS)

●USB interface to connect the PC, assisted by Software Dataview TH51X (especially for TH51X series Hardness Test) with both online measurement and offline data analysis mode: curve chart, data sheet, setting of tolerance limit and data report are available.

●Connected to Printer by RS 232 and test values can be printed directly

●Measuring Direction:Any direction 360°

●Automatic identification of impact test direction

●Memory of 270 data in 9 group

●Backlight for convenience in darkness

●Upper /lower limits setting

●AAA 1.5V battery, whose capacity shown in display

●Auto power off

●TIME®5100: integrated with D impact device for the majority of hardness testing requirements

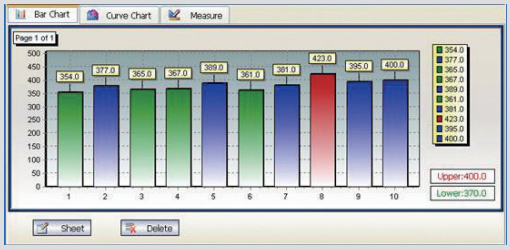
●TIME®5102: integrated with C impact device for hardness testing on thin, light and surface hardened components

●TIME®5104: integrated with DL impact device for hardness testing of deep grooves and tooth surface

Technical Specification

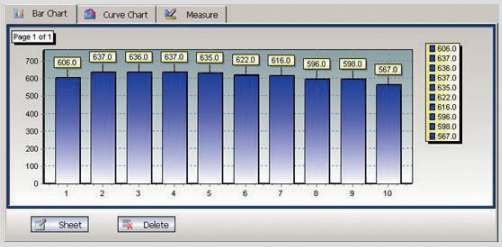
Model	TIME®5100	TIME®5102	TIME®5104
Impact device	D integrated	C integrated	DL integrated
Hardness scales	HLD, HB, HRC, HRB, HV, HS	HLC, HB, HRC, HRB, HV, HS	HLDL, HB, HRC, HRB, HV, HS
Accuracy	±6HLD(760 ±30HLD)	±12HLC	±12HLDL
Memory	270 average readings in 9 group files		
Output	RS 232 to printer	RS232 to printer	RS232 to printer
Min. surface roughness of work piece	1.6μm (Ra)	0.4μm (Ra)	1.6μm (Ra)
Max. work piece hardness	960HLD	960HLC	950HLDL
Min. radius of work piece (convex/concave)	Rmin = 50mm (with support ring Rmin= 10mm)	Rmin=11mm (with support ring)	Rmin = 10mm (with support ring Rmin= 10mm)
Min. work piece weight	2~5kg on stable support 0.05~2kg with compact coupling	0.5~1.5kg on stable support 0.02~0.5kg with compact coupling	2~5kg on stable support 0.05~2kg with compact coupling
Min. work piece thickness coupled	5mm	1mm	5mm
Min. thickness of hardened layers	0.8mm	0.2mm	0.8mm
Indentation depth	Impact devices data	Impact devices data	Impact devices data
Continuous working time	8h (without backlight)		
Power	AAA 1.5V batteries		
Operating temperature	0~40℃	0~40℃	0~40℃
Dimensions (mm)	155×55×25	160×60×25	215×60×25
Weight (g)	180	180	180

Online measurement



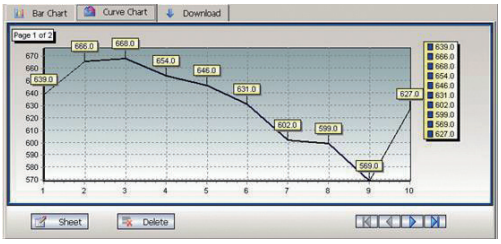
Data analysis

Bar chart

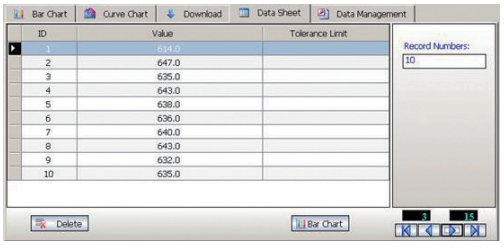


Dataview TH51X is special software for TH51X series Hardness Tester. The data stored in the Hardness Tester TH51X series can be transferred to the PC for further analysis with Dataview TH51X. It has online measurement mode and offline anaalysis mode, data analysis, graphics display and print output functions are all available.

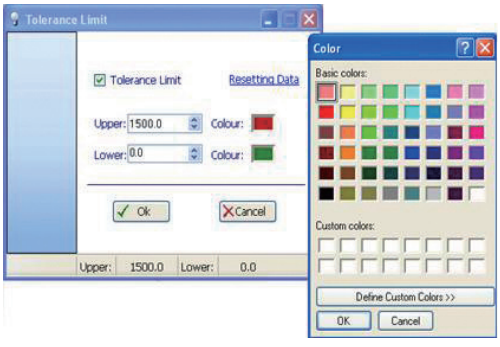
Curve chart



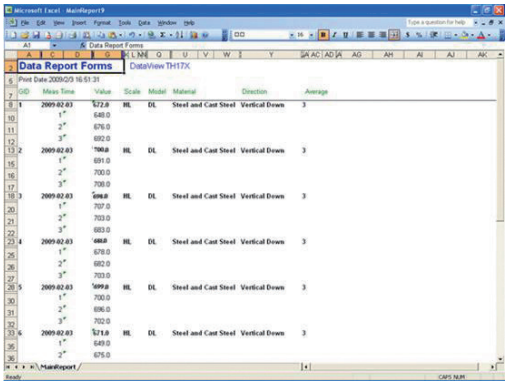
Data sheet



Setting of tolerance limit



Data report



TIME®5100/5102/5104

SOFTWARE

Features

- Light Mini Unit with simple menu, easy and convenient to use
- Universal D type standard impact device for the majority of hardness testing requirements
- Wide range measurements in HLD and conversion among other 6 common hardness scales
- Measuring Direction: Any direction 360°
- Software calibration
- Battery indicator with auto power off in low battery

TIME®5120

PORTABLE HARDNESS TESTER

Standard Delivery

●Main unit	1
●Test block HLD	1
●Charger	1
●Cleaning brush	1
●TIME certificate	1
●Warranty card	1
●Instruction manual	1

Optional Accessory

●Support rings

Technical Specification

Standard impact device	D integrated
Hardness scales	HL,HB,HRA,HRB,HRC,HV,HS
Measuring range	(170~960)HLD
Accuracy	6HLD
Memory	Current value
Min,surface rougjness of workpieces	1.6μm(Ra)
Max.workpieces hardness	960HLD
Min,radius of workpieces	Rmin=50mm (with support ring Rmin=10mm)
workpieces	5mm
Min.thickness of hardened layers	0.8mm see page 14
Indentation depth	24μm
Charging time	2h~3h
Continuous working time	8h
Power supply	Rechargeable Li battery 3.7V
Operating temperature	0~40°C
Dimension (mm)	145×35×30
Weight (g)	130

Features

- Impact device G for Solid components. E.g. heavy castings and forgings.
- Two work modes: either in Individual mode, or in System mode (as the Impact device G for TIME®5200)
- Testing materials, hardness scale, testing direction and measurement times can be chosen
- Conversion among 3 hardness scales: HLG,HB,HRB
- Automatic identification of impact test direction
- Review、delete current measured data & calculate the average values automatically
- Memory of 200 average values
- Transfer to PC via USB in Word & Excel format , with Powerful PC Software included
- Battery indicator with auto power off in low battery or 2 minutes without working

TIME®5106

PORTABLE HARDNESS TESTER

Standard Delivery

●Main unit	1	●Cleaning brush	1
●Test block G	1	●TIME certificate	1
●Mini USB cable	1	●Warranty card	1
●Charger	1	●Instruction manual	1

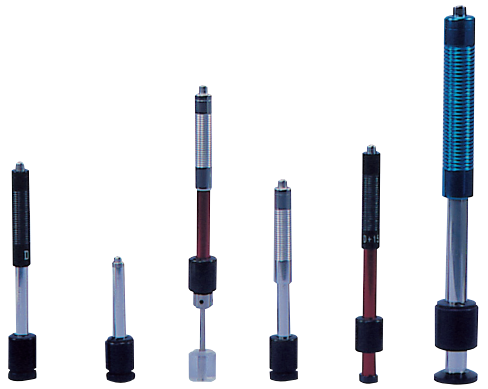
Conversion Table

Material	Hardness scale	Range
Steel and cast steel	HB	90~646
	HRB	47.7~99.9
Grey cast iron	HB	92~326
Nodular cast iron	HB	127~364
Cast aluminum alloys	HB	32~168
	HRB	23.8~85.5

Technical Specification

Impact device	G type
Impact energy	90mJ
Work mode	Used single or system mode
Display	OLED screen, 128x64 dot matrix, brightness adjustable
Measuring range	(200~750)HLG see page 13
Accuracy	±12HLG
Repeatability	12HLG
Measuring direction	360°
Hardness scales	HLG、HB、HRB
Memory	200 average value
Interface	USB
Data output	Transfer data to PC
Operating voltage	3.3V
Operating temperature	0~40℃
Humidity	≤90%
Dimensions (mm)	254 × 50 × 40
Weight (g)	310

Impact Devices for Portable Hardness Tester



Measuring range of TIME Leeb hardness tester

Material	Hardness scale	Impact device					
		D/DC	D+15	C	G	E (imported)	DL
Steel and cast steel	HRC	17.9～68.5	19.3～67.9	20.0～69.5		22.4～70.7	20.6～68.2
	HRB	59.6～99.6			47.7～99.9		37.0～99.9
	HRA	59.1～85.8				61.7～88.0	
	HB	127～651	80～638	80～683	90～646	83～663	81～646
	HV	83～976	80～937	80～996		84～1042	80～950
	HS	32.2～99.5	33.3～99.3	31.8～102.1		35.8～102.6	30.6～96.8
Steel	HB	143～650					
CWT. steel	HRC	20.4～67.1	19.8～68.2	20.7～68.2		22.6～70.2	
	HV	80～898	80～935	100～941		82～1009	
Stainless steel	HRB	46.5～101.7					
	HB	85～655					
	HV	85～802					
GC. iron	HRC						
	HB	93～334			92～326		
	HV						
NC. iron	HRC						
	HB	131～387			127～364		
	HV						
C. Alum	HB	19～164		23～210	32～168		
	HRB	23.8～84.6		22.7～85.0	23.8～85.5		
Brass	HB	40～173					
	HRB	13.5～95.3					
Bronze	HB	60～290					
Copper	HB	45～315					

Tolerance and repeatability

No.	impact device	Hardness value of Leeb standard hardness block	Accuracy of displayed value	Repeatability of displayed value
1	D	790±40HLD 530±40HLD	±6 HLD ±10 HLD	6 HLD 10 HLD
2	DC	790±30HLDC 530±40HLDC	±6 HLDC ±10 HLDC	6 HLDC 10 HLDC
3	DL	894±40HLDL 736±40HLDL	±12 HLDL	12 HLDL
4	D+15	795±40HLD+15 544±40HLD+15	±12 HLD+15	12 HLD+15
5	G	590±40HLG 500±40HLG	±12 HLG	12 HLG
6	E	755±40HLE 508±40HLE	±12 HLE	12 HLE
7	C	851±40HLC 590±40HLC	±12 HLC	12 HLC

Technical specification

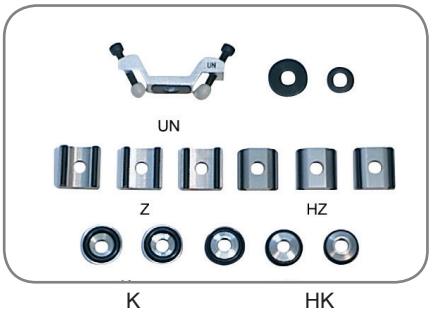
Types of impact device	DC(D)/DL	D+15	C	G	E(imported)
Impact energy Mass of impact body	11mJ 5.5g/7.2g	11mJ 7.8g	2.7mJ 3.0g	90mJ 20.0g	11mJ 5.5g
Test tip hardness Diameter of test tip Material of test tip	1600HV 3mm Tungsten carbide	1600HV 3mm Tungsten carbide	1600HV 3mm Tungsten carbide	1600HV 5mm Tungsten carbide	5000HV 3mm Diamond
Impact device diameter Impact device length Impact device weight	20mm 86(147)/ 75mm 50g	20mm 162mm 80g	20mm 141mm 75g	30mm 254mm 250g	20mm 155mm 80g
Max. hardness of sample	940HV	940HV	1000HV	650HB	1200HV
Roughness of sample surface:	1.6μm	1.6μm	0.4μm	6.3μm	1.6μm
Minimum weight of sample: Measure directly Need support firmly Need coupling tightly	>5kg 2~5kg 0.05~2kg	>5kg 2~5kg 0.05~2kg	>1.5kg 0.5~1.5kg 0.02~0.5kg	>15kg 5~15kg 0.5~5kg	>5kg 2~5kg 0.05~2kg
Min. thickness of sample Coupling tightly Min. depth of layer thickness for surface	5mm ≥0.8mm	5mm ≥0.8mm	1mm ≥0.2mm	10mm ≥1.2mm	5mm ≥0.8mm

Size of tip indentation

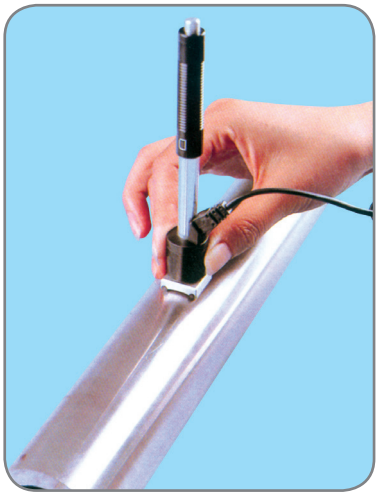
Hardness 300HV	Indentation diameter	0.54mm	0.54mm	0.38mm	1.03mm	0.54mm
	Depth of indentation	24μm	24μm	12μm	53μm	24μm
Hardness 600HV	Indentation diameter	0.54mm	0.54mm	0.32mm	0.90mm	0.54mm
	Depth of indentation	17μm	17μm	8μm	41μm	17μm
Hardness 800HV	Indentation diameter	0.35mm	0.35mm	0.35mm	___	0.35mm
	Depth of indentation	10μm	10μm	7μm	___	10μm
	D: General test. DC : Testing hole or inner of cylinder. DL : Test slender narrow groove or hole.		D+15 : Test groove or reentrant surface.	C : Test small, light, thin parts and surface of hardened layer.	G : Test large, thick, heavy and rough surface cast steel.	E : Test super high hardness Material.

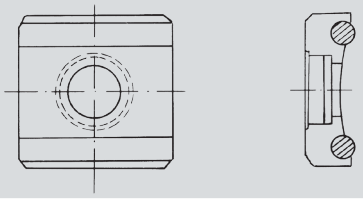
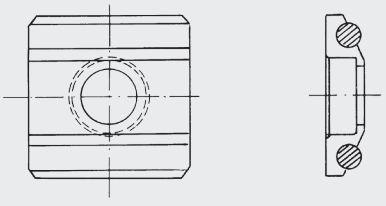
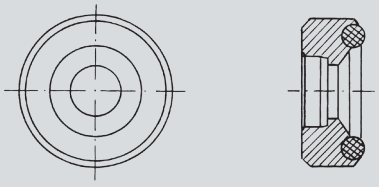
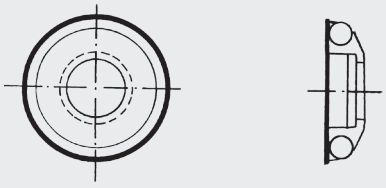
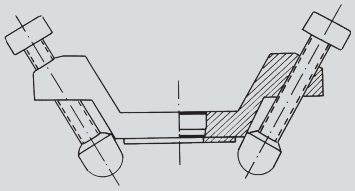
Optional Support Rings

Function: they are used for tested surface whose curvature radius is less than 30mm (D, DC, D+15, C,E Impact devices) or less than 50mm (G impact device) .



Support Rings



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

Features

- Perfect accuracy, within±3% HV, ±1.5HR, ±3%HB
- Least destructive microscopic indentation——only high-power microscope can observe the indentation
- Quick measurement——result in 2 seconds
- Large LCD display——directly showing measurement result, loading force, counts, maximum, minimal, average values and deviation.
- 2 year warranty on tester (Probe not included)
- Memory of 1000 groups data
- Simple calibration——save 20 groups calibration data to improve calibration efficiency.

TIME®5620

ULTRASONIC HARDNESS TESTER

Standard Delivery

●Main unit	882-121
●2Kgf manual probe HP-2k	882-321
●Probe silicone cap	882-711
●Probe cable	882-801
●USB cable	882-851
●Accessories box	882-901
●TIME certificate	1
●Warranty card	1
●Instrument manual	1

Technical Specification

Product name	Ultrasonic hardness tester
Model	TIME-5620
Code#	#882-121
Loading force	2Kgf(optional: 1Kgf, 5Kgf, 10Kgf)
Measuring range	HB: 85-650;HV 80-1599; HRC 20-70;HRB: 41-100; HRA: 61-85.6 HS: 34.2-97.3;Mpa: 255-2180N/mm
Measuring accuracy	HV:±3%HV; HRC:±1.5HRC; HB:±3%HB
Indenter	136°vickers diamond indenter
Measuring direction	Support 360°
Data storage	To save 1000-groups of measuring data and 20-groups of calibration data
Hardness scale	HV、HB、HRC、HRA、HRB、MPa
Data display	Loading force, testing-times, testing result, average, maximum, minimum, deviation and conversion scale.
Hardness indication	LCD display
Operating environment	Temperature:-10℃~50℃; humidity: 30%~80%R.H
Operating voltage	DC 4.8V
Dimensions (mm)	160x80x31
Weight (g)	500g（without probe）