

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
•Instruction manual	1
• Warranty card	1

Optional Accessories

- Support rings
- Dataview software

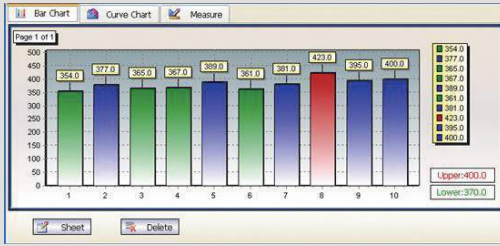
**Features**

- USB communication interface
- Automatic identification of impact test direction
- Memory of 270 average data in 9 group files
- Upper and lower limit setting
- Automatically switch off
- Backlight for convenient use in darkness
- Battery capacity display
- AAA 1.5V battery
- Integrated calibration function
- TIME®5100: integrated with D impact device for normal hardness testing
- TIME®5102: integrated with C impact device for hardness testing on thin, light and face-hardened workpiece
- TIME®5104: integrated with DL impact device for hardness testing of deep grooves and tooth surface

Technical Specification

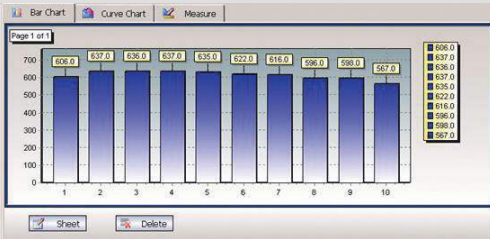
Model	TIME®5100	TIME®5102	TIME®5104
Impact Device	D integrated	C integrated	DL integrated
Hardness scales	HLD, HB, HRC, HRB, HV, HS	HLC, HB, HRC, HRB, HV, HS	HLDL, HB, HRC, HRB, HV, HS
Accuracy	±6HLD(760 ±30HLD)	±12HLC	±12HLDL
Memory	270 average readings in 9 group files		
Output	RS 232 to printer	RS232 to printer	RS232 to printer
Min. Surface Roughness of Work piece	1.6µm (Ra)	0.4µm (Ra)	1.6µm (Ra)
Max. Work piece Hardness	900HLD	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	150h (without backlight)		
Power	AAA 1.5V batteries		
Operating temperature	0~40℃	0~40℃	0~40℃
Overall dimensions(mm)	155×55×25	160×60×25	215×60×25
Weight(g)	166	180	180

Online measurement

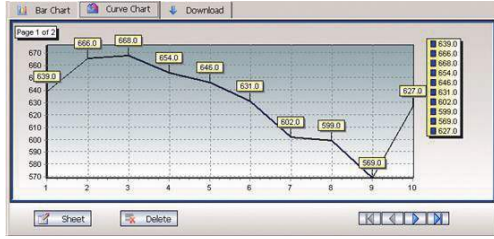


Data analysis

Bar chart



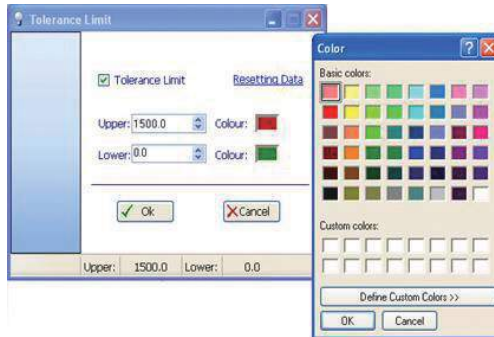
Curve Chart



Data sheet

ID	Value	Tolerance Limit
1	614.0	
2	647.0	
3	635.0	
4	643.0	
5	638.0	
6	636.0	
7	640.0	
8	643.0	
9	632.0	
10	635.0	

Setting of Tolerance limit



DataView TH51X is a special software for TH51X series Hardness Tester.

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

TIME® 5100/5102/5104
SOFTWARE

Data report

ID	Value	Scale	Model	Material	Direction	Average
1	627.0	HL	DL	Steel and Cast Steel	Vertical Down	3
2	647.0	HL	DL	Steel and Cast Steel	Vertical Down	3
3	635.0	HL	DL	Steel and Cast Steel	Vertical Down	3
4	643.0	HL	DL	Steel and Cast Steel	Vertical Down	3
5	638.0	HL	DL	Steel and Cast Steel	Vertical Down	3
6	636.0	HL	DL	Steel and Cast Steel	Vertical Down	3
7	640.0	HL	DL	Steel and Cast Steel	Vertical Down	3
8	643.0	HL	DL	Steel and Cast Steel	Vertical Down	3
9	632.0	HL	DL	Steel and Cast Steel	Vertical Down	3
10	635.0	HL	DL	Steel and Cast Steel	Vertical Down	3