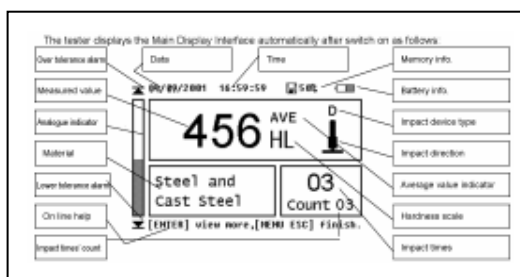


Hardness Tester TH160



- Developed model of TH140
- On-Board memory holds 240-1000 groups of data
- Automatic identification Impact Devices and test direction (Except G)
- Time and date setting; auto-clock
- Integral thermal printer, print all test results and histogram
- Li Battery , low voltage indication and sound alarm
- Dataview for PC operation
- Software data and upper / lower limits setting and sound alarm
- Software to connect with PC
- Large LCD with back-light, showing all functions and parameters
- Direct display of hardness scales HRB, HRC,HV, HB, HS, HL
- Conversion to tensile strength (U.T.S.)
- For all metallic materials
- Wide measuring range (see next page)
- Six Impact Devices are available for special applications



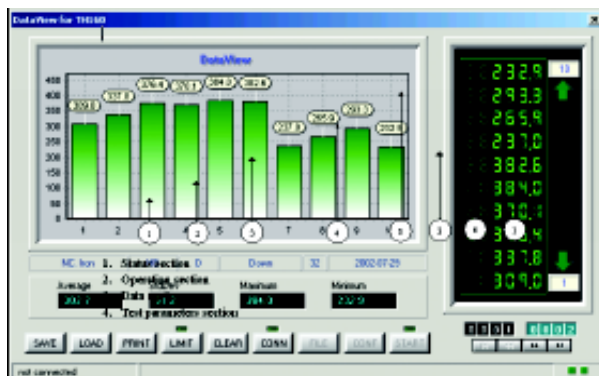
Technical specifications

Hardness scale	HL, HRC, HRB, HRA, HV, HB, HS
Memory	240-1000 groups (Impact times: 32-1)
Measuring range	See next page
Tensile strength U.T.S. range	374~2652 MPa
Accuracy	±6HLD (760±30HLD) error of displayed value 6HLD (760±30HLD) repeatability of displayed value
Statistics function	Average / Max / Min value calculation, limits setting and alarm
Standard Impact Device	D
Optional Impact Devices	DC/DL/C/D+15/G (see page 8)
Max. Workpiece Hardness	996HV(For Impact Devices D/DC/DL/D+15/C) 646HB(For Impact Device G)
Min. Radius of Workpiece (convex/concave)	Rmin = 50mm (with support ring Rmin= 10mm)
Min. Workpiece weight	2~5kg on stable support 0.05~2kg with compact coupling
Min. Workpiece thickness	5mm (Impact Device D/DC/DL/D+15) 1mm (Impact Device C) 10mm (Impact Device G)
Min. thickness of hardened surface	0.8mm
Power	Rechargeable Li Battery, pile for TH160
Continuous Working time	About 100h (no printing and backlight)
Charging time	2.5~4 hours
Operating temperature	0~40°C
Relative humidity	±90%
Overall dimensions	230×90×46.5mm
Weight	420g (including Impact Device and printer)

Hardness Tester TH160

Measuring range

Material	Hardness Scale	D/DC LD: 170-900	D+15 LD+15: 330-900	C LC: 350-960	DL LDL: 560-950	G LG: 200-750
Steel and cast steel	HRC	20-68.4	19.3-67.9	20-69.5	20.6-68.2	
	HRB	38.4 - 99.8			37-99.9	47.7-99.9
	HRA	59.1-85.8				
	HB	127-651	80-638	80-683	81-646	90-646
	HV	81-955	80-937	80-996	80-950	
	HS	32.5-99.5	33.3-99.3	31.8-102.1	30.6-96.8	
Stainless	HRB	46.5-101.7				
	HB	85-655				
	HV	85-802				
CWT/st	HRC	20.4-67.1	19.8-68.2	20.7-68.2		
	HV	80-898	80-935	100-941		
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				



Dataview for TH160



Standard delivery

- Main unit with removable printer 1
- Impact Device type D 1
- Test block with HLD value 1
- Charger 1
- Cleaning brush 1
- TIME certificate 1
- Instruction manual 1
- Warranty card 1
- Carrying case 1

Optional accessories

- Special Impact Devices
- Support rings
- Dataview or Datalab and cable

Model choosing guide

Model Choosing Guide

Model		HLN-11A	TH140	TH160
Data memory		No	48-350 group (Impact times:32-1)	240-1000 group (Impact times:32-1)
Material		Steel and cast steel	Steel and cast steel	steel and cast steel
			Steel, stainless steel	Steel, stainless steel
			C.W.Tool steel	C.W.Tool steel
		C. W. Tool steel	Grey cast iron	Grey cast Iron
		Grey cast Iron	Nodular cast iron	Nodular cast iron
		Nodular cast iron	Cast aluminum	Cast aluminum
		Cast aluminum	Brass Bronze, Copper etc.	Brass, Bronze, Copper etc.
Battery		BrassBronze, Copper etc.	Rechargeable NiMH battery	Rechargeable Li battery
		Rechargeable NiMH battery	Continuous working 50 hours (no printer and backlight)	Comtinuous working 100 hours (no printer and backlight)
Working time		Continuous working 50 hours (no printer)	Yes	Yes
Battery indicator		No	Software calibration±15HLD	Software calibration±15HLD
Calibration		Software calibration	Yes	Yes
Limit alarm		No	Yes	Yes
Backlight		No	Yes, automatically shut down after 5 minutes	Yes, automatically shut down
Automatically shut down		Yes, automatically shut down after 5 minutes	RS232 interface	after 5 minutes
Communication interface		No	Dot printer	RS232 interface
Printer		Dot printer	Yes	Thermal printer
Automatically identify impact device		Yes		Yes
Automatically identify test direction		No	Yes	Yes
Communication software		No	Data processing software used with computer	Data processing software used with computer
Measuring accuracy (Displayed value)	±6HLD HLD=760±30	±6HLD HLD=760±30	±6HLD HLD=760±30	±6HLD HLD=760±30
	6HLD HLD=760±30	±6HLD HLD=760±30	6HLD HLD=760±30	6HLD HLD=760±30



HLN-11A



TH140



TH160