

# Hardness Tester TH170



- 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
- Software calibration
- Battery capacity display
- AAA 1.5V battery
- Computer software available

## Measuring range

Material	HLD	HRB	HRC	HB	HV	HS
Steel & cast steel	300~900	38.4~99.8	20.4~68.4	81~654	81~955	32.5~99.5
Cold work tool steel	300~840		20.4~67.1	85~655	80~898	
Stainless steel	300~800	46.5~101.7	19.6~62.4		85~802	
Grey cast. Iron	360~650			93~334		
Nodulor cast. Iron	400~660			131~387		
Cast AL. Alloys	170~570	23.8~84.6		19~164		
Brass	200~550	13.5~95.3		40~173		
Bronze	300~700			60~290		
Copper	200~690			45~315		

## Technical specifications

Standard Impact Device	D integrated
Hardness scales	HLD, HB, HRC, HRB, HV, HS
Measuring range / materials	See table above
Measuring direction	360°
Accuracy	±6HLD(760 ±30HLD) ±10HLD(530 ±40HLD)
Memory	270 average readings in 9 group files
Output	USB2.0
Min. Surface Roughness of Work piece	1.6μ ( Ra)
Max. Work piece Hardness	955HV
Min. radius of Work piece (convex/concave)	Rmin = 50mm (with support ring Rmin=10mm)
Min. work piece weight	2~5kg on stable support 0.05~2kg with compact coupling
Min. Work piece thickness coupled	5mm
Min. Thickness of hardened layers	0.8mm
Indentation depth	Impact Device data (see page 8)
Continuous working time	150 h (without backlight)
Power	AAA 1.5V batteries (2pcs)
Operating temperature	0~40℃
Overall dimensions	155mm×55mm×25mm
Weight	About 166 g

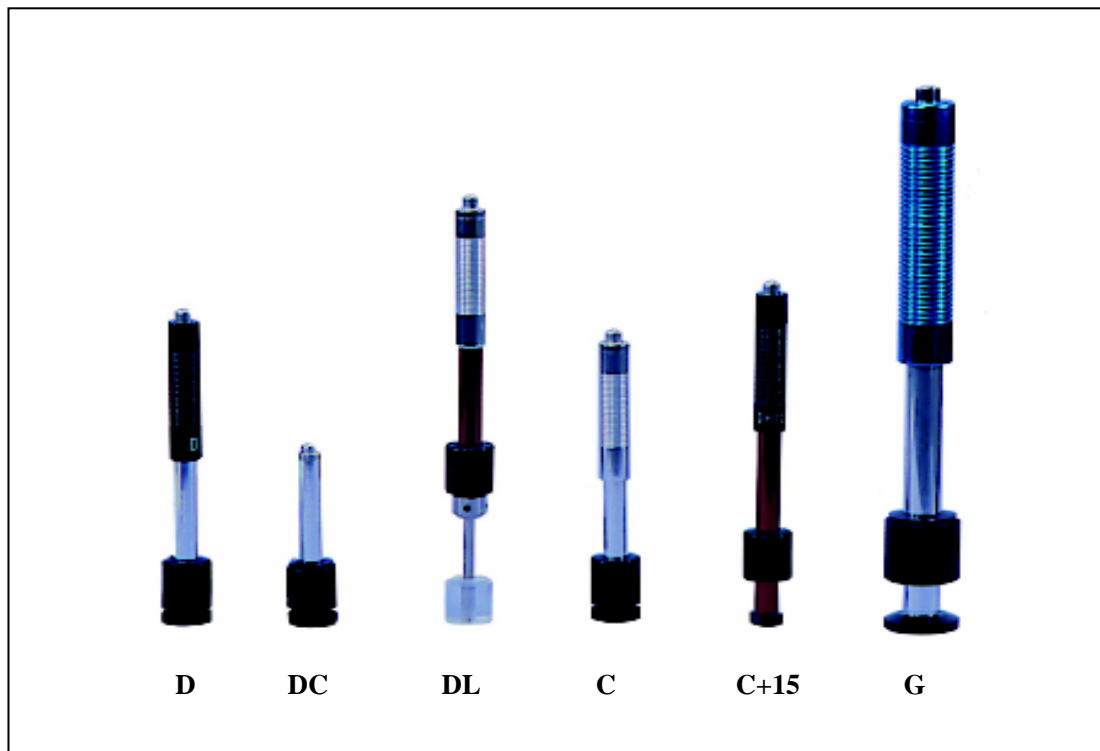
## Standard delivery

- Main unit integrated with Impact Device D 1
- Test block with HLD value 1
- Cleaning brush 1
- Battery AAA 1.5V 2
- TIME certificate 1
- Instruction manual 1
- Warranty card 1
- Carrying case 1

## Optional accessories

- Support rings
- Computer software

# Optional Impact Devices

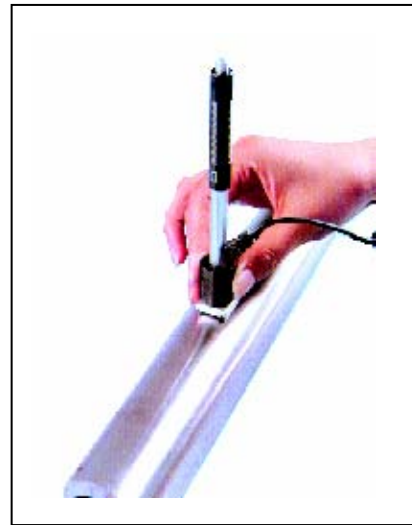
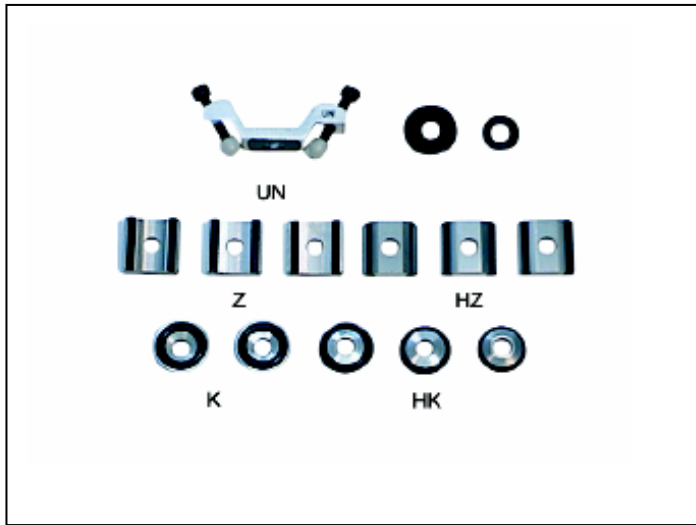


Optional Impact Devices

## Technical specifications

Application range of Impact Devices		D type for general pieces DC type for hole or cylinder DL type for long and narrow channel or hole	D+15 type for measuring in grooves or recessed surfaces	C type for measuring light and small piece and surface hardened layer	G type for measuring heavy and rough cast and forged pieces
Impact Device		D/DC/DL	D+15	C	G
Impacting energy		11mj	11mJ	2.7mJ	90mJ
Mass of impact body		5.5g/5.5g/7.3g	7.8g	3.0g	20g
Hardness of spherical test tip		1600HV	1600HV	1600HV	1600HV
Diameter of spherical test tip		3mm	3mm	3mm	5mm
Material of spherical test tip		Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide
Diameter of Impact Device		20mm	20mm	20mm	30mm
Length of Impact Device		147/86/75mm	162mm	141mm	254mm
Weight of Impact Device		50g	80g	75g	250g
Max. hardness of workpiece		940/940/950HV	940HV	1000HV	650HB
Average surface roughness of the test piece		Ra: 1.6 μm	Ra: 1.6μm	Ra: 0.4μm	Ra: 6.3μm
Min. weight of test piece	Direct measuring	5kg	5kg	1.5kg	15kg
	On stable support	2kg	2kg	0.5kg	5kg
	With compact coupling	0.05kg	0.1kg	0.02kg	0.5kg
Min. thickness of test piece	Compact coupling	5mm	5mm	1mm	10mm
	Min. case hardened depth	0.8mm	0.8mm	0.2mm	1.2mm
Size of indentation of spherical test tip					
Hardness 300HV	Indentation diameter	0.54mm	0.54mm	0.38mm	1.03mm
	Indentation depth	24μm	24μm	12μm	53μm
Hardness 600HV	Indentation diameter	0.54mm	0.54mm	0.32mm	0.90mm
	Indentation depth	17μm	17μm	8μm	41μm
Hardness 800HV	Indentation diameter	0.35mm	0.35mm	0.35mm	
	Indentation depth	10μm	10μm	7μm	

# Optional Support Rings



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~∞