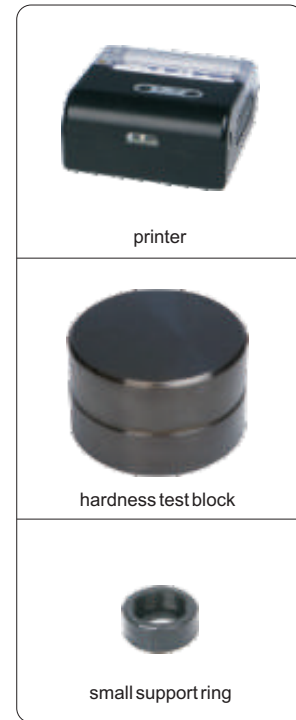


PORTABLE HARDNESS TESTER CODE ISH-SPHA*



- Based on Leeb(HL) , converted to Vickers(HV), Brinell(HB), Rockwell(HRC and HRB), Shore(HS) and tensile strength(MPa)
- Connected with printer via bluetooth
- Connected with computer via USB port
- Up to 800 test results can be saved
- Low and high limits with judgement
- Touch screen operation, large display with backlight
- Language: English, Chinese, Italian, German, French and Russian
- Automatic power off
- According to ASTM A956

SPECIFICATION

Min. reading	1HL, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa
Accuracy	±6HL (when HL=800)
Display	Leeb(HL), converted hardness, material, impact direction, test times, average value, deviation, time
Output	bluetooth and USB
Power supply	built-in rechargeable battery
Dimension	135×83×24mm
Weight	350g

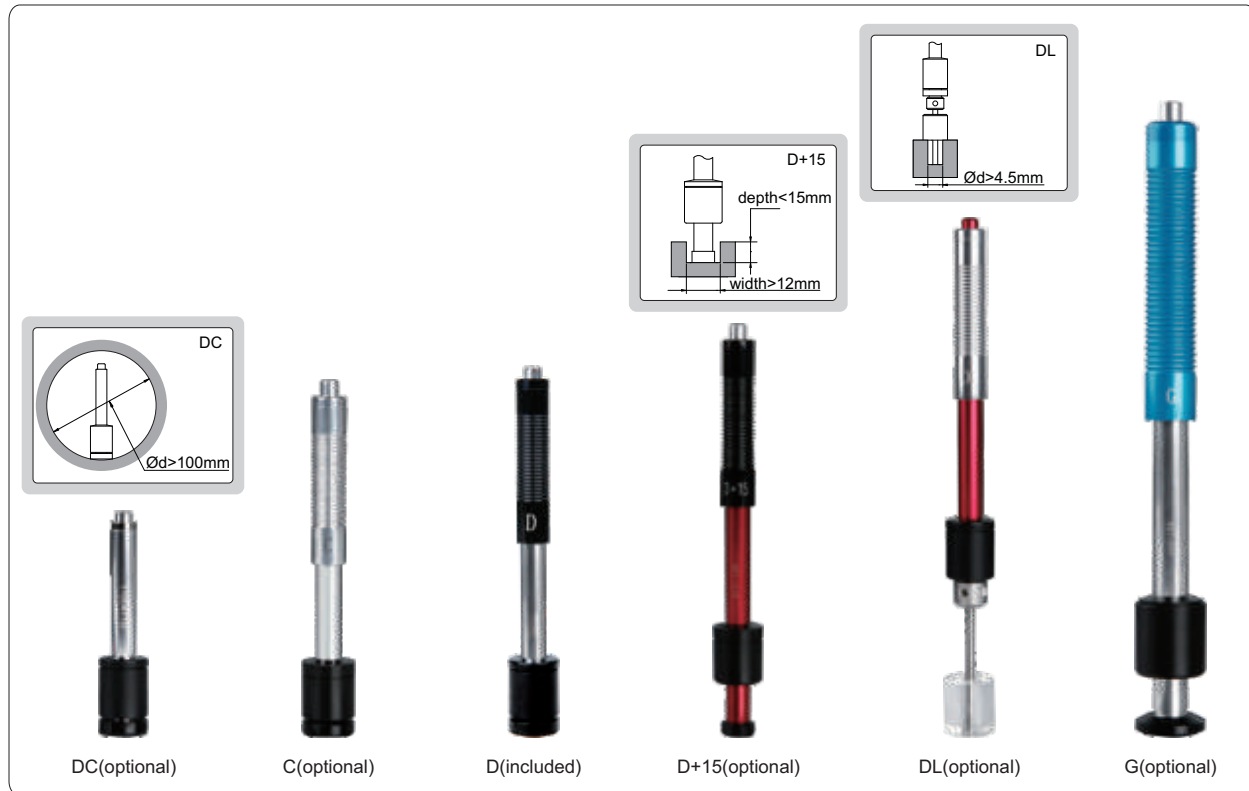
STANDARD DELIVERY

Main unit	1pc
Impact device D	1pc
Printer	1pc
Hardness test block	1pc
Small supporting ring	1pc
Cleaning brush	1pc
AC/DC adapter	1pc
USB cable and software	1pc of each
Pen for touch screen	1pc

OPTIONAL ACCESSORY

Impact device DC	ISH-SPHA-DC
Impact device C	ISH-SPHA-C
Impact device D+15	ISH-SPHA-D15
Impact device DL	ISH-SPHA-DL
Impact device G	ISH-SPHA-G
Hardness test block	ISH-BHLG (page S13)
Support rings	page S10

* Add suffix on code No. to devote AC voltage and plug (refer to page V1)



APPLICABLE WORKPIECE

Impact device	DC	C	D	D+15	DL	G	
Application	inner wall of small space	small or thin workpiece, coating layer	general use	deep groove	narrow slot or small hole	casting or forging workpiece	
Maximum roughness of workpiece(Ra)	1.6 μm	0.4 μm	1.6 μm	1.6 μm	1.6 μm	7 μm	
Minimum weight of workpiece	direct measurement	5kg	1.5kg	5kg	5kg	5kg	15kg
	on solid support	2kg	0.5kg	2kg	2kg	2kg	5kg
	coupled on plate	0.1kg	0.02kg	0.1kg	0.1kg	0.1kg	0.5kg
Minimum thickness of workpiece	5mm	1mm	5mm	5mm	5mm	10mm	

APPLICABLE MATERIAL AND HARDNESS RANGE

Material	Scale	DC	C	D	D+15	DL	G
Steel & cast steel	HRC	20-68	20-69.5	20-68	19.3-67.9	20.6-68.2	
	HRB	38-100	38.4-99.5	38-100		37.0-99.9	47.7-99.9
	HB	81-654	80-683	81-654	80-638	81-646	90-646
	HV	81-955	80-996	81-955	180-818	80-950	
	HS	32-100	32-102	32-100	33-99	31-97	
	Tensile strength(MPa)			375-2639			
Cast iron	HB	93-334		93-334			92-326
	HV						
	HRC						
Tool steel	HRC	20-67		20-67			
	HV	80-898		80-898			
Stainless steel	HRB	46-101		46-101			
	HV	85-802		85-802			
	HB	85-655		85-655			
Cast aluminum alloy	HB	19-164		19-164			
	HRB	23-84		23-84			
Brass	HB	40-173		40-173			
	HRB	13-95		13-95			
Bronze	HB	60-290		60-290			
Copper	HB	45-315		45-315			