

ALUMINUM LEVELS

MAGNETIC BASE

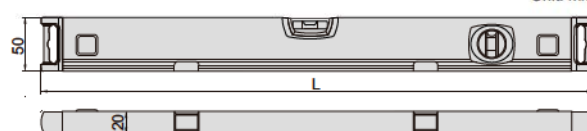
VIALS MADE IN ISRAEL
LIFETIME WARRANTY

- Shockproof horizontal and vertical vials
- Magnetic base
- Shock absorbing rubber end caps
- Working temperature: -15°C~55°C



4914-600

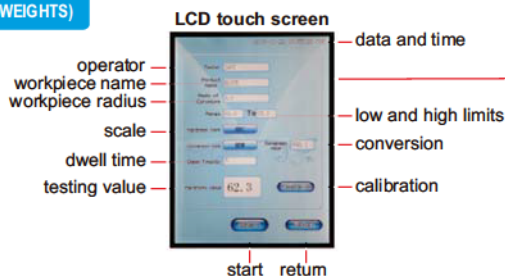
Unit: mm



Code	Size (L)	Accuracy
4914-600	600mm	0.5mm/m (.006in/ft)
4914-800	800mm	0.5mm/m (.006in/ft)
4914-1000	1000mm	0.5mm/m (.006in/ft)
4914-1200	1200mm	0.5mm/m (.006in/ft)

AUTOMATIC DIGITAL ROCKWELL HARDNESS TESTER
CODE ISH-RSR400INSPECTION
CERTIFICATEFORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHTS)DATA
OUTPUT

VIDEO

for cylinders with
diameter Ø4~60mmfor cylinders with
diameter Ø2~4mm

- Automatic testing, the preliminary and main test force is loaded automatically
- LCD touch screen, easy operation
- Convert to other Rockwell scales, HV or HB automatically
- Low and high limits
- Insert USB flash disk, save the testing results as Excel
- Self-correcting the hardness value for curved workpiece
- Force loading by electric motor (without weights)
- The test force is selected automatically according to hardness scale

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD HRF, HRG (with standard indenters) HRE, HRH, HRK, HRL, HRM, HRP HRR, HRS, HRV (with optional indenter)
Preliminary test force	98N
Test force	588N, 980N, 1471N
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	0~60 second
Resolution	0.1HR
Output	USB
Max. workpiece height	220mm
Max. workpiece depth	200mm (from the center of indenter)
Power supply	220V, 50/60Hz **
Dimension	510×260×780mm
Weight	70kg

** Add "-U" on code No. when power supply is 110V, 50/60Hz

STANDARD DELIVERY

Main unit	1pc
Ø63mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	1pc
Hardness test block HRB88~95	1pc
Hardness test block HRC60~65	1pc
Hardness test block HRC20~30	1pc
USB flash disk (8G)	1pc
Level	1pc
Touch pen	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1
Small V-type anvil	ISH-SMALL ANVIL

FORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHTS)

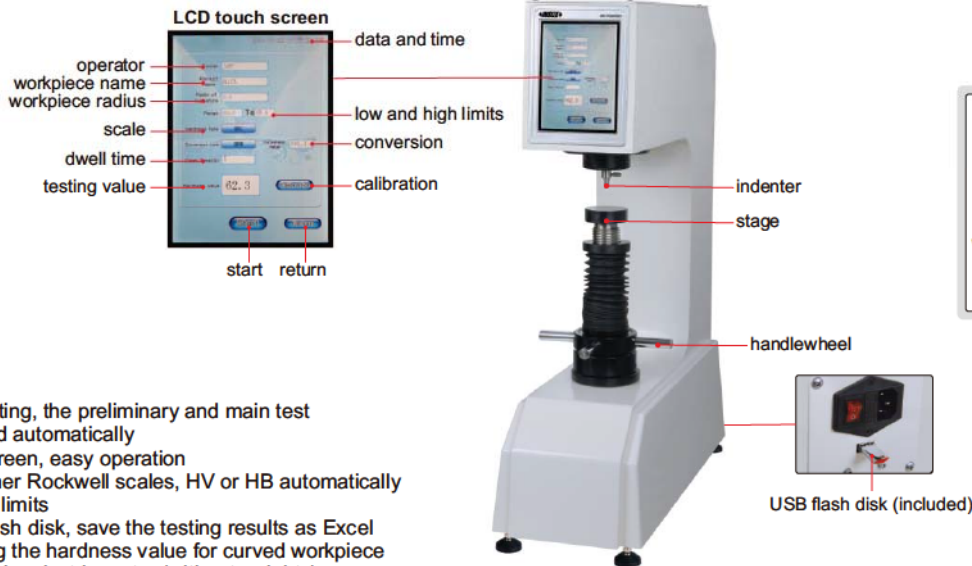
DATA
OUTPUT



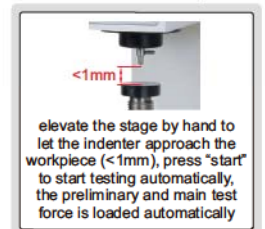
VIDEO

AUTOMATIC DIGITAL SUPERFICIAL ROCKWELL HARDNESS TESTER CODE ISH-RSR500

INSPECTION
CERTIFICATE



automatic testing



- Automatic testing, the preliminary and main test force is loaded automatically
- LCD touch screen, easy operation
- Convert to other Rockwell scales, HV or HB automatically
- Low and high limits
- Insert USB flash disk, save the testing results as Excel
- Self-correcting the hardness value for curved workpiece
- Force loading by electric motor (without weights)
- The test force is selected automatically according to hardness scale



Ø63mm flat anvil
(included)



Ø150mm flat anvil
(included)



level (included)



touch pen (included)



V-type anvil
(included)
for cylinders with
diameter Ø4~60mm



small V-type anvil
(optional)
for cylinders with
diameter Ø2~4mm

SPECIFICATION

Hardness scale	HR15N, HR30N, HR45N, HR15T, HR30T, HR45T (with standard indenters)
	HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y (with optional indenter)
Preliminary test force	29.4N/3kgf
Test force	147.1N/15kgf, 294.2N/30kgf, 441.3N/45kgf
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	0~60 second
Resolution	0.1HR
Output	USB
Max. workpiece height	220mm
Max. workpiece depth	200mm (from the center of indenter)
Power supply	220V, 50/60Hz **
Dimension	510×260×780mm
Weight	70kg

** Add "-U" on code No. when power supply is 110V, 50/60Hz

STANDARD DELIVERY

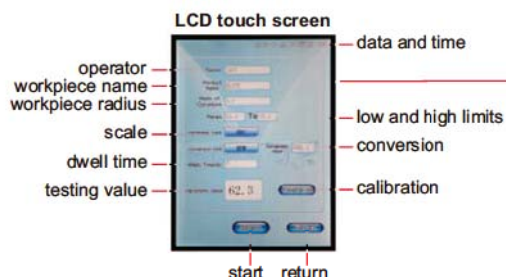
Main unit	1pc
Ø63mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	1pc
Hardness test block 78~88HR15N	1pc
Hardness test block 55~73HR30N	1pc
Hardness test block 57~69HR30T	1pc
USB flash disk (8G)	1pc
Level	1pc
Touch pen	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Hardness test block 78~88HR15N	ISH-BHR15N1
Hardness test block 55~73HR30N	ISH-BHR30N1
Hardness test block 57~69HR30T	ISH-BHR30T1
Small V-type anvil	ISH-SMALL ANVIL

AUTOMATIC DIGITAL ROCKWELL AND SUPERFICIAL ROCKWELL HARDNESS TESTER CODE ISH-RSR600

**INSPECTION
CERTIFICATE**



FORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHTS)

DATA
OUTPUT



- Automatic testing, the preliminary and main test force is loaded automatically
- LCD touch screen, easy operation
- Convert to other Rockwell scales, HV or HB automatically
- Low and high limits
- Insert USB flash disk, save the testing results as Excel
- Self-correcting the hardness value for curved workpiece
- Force loading by electric motor (without weights)
- The test force is selected automatically according to hardness scale



Ø63mm flat anvil
(included)



Ø150mm flat anvil
(included)



level (included)



touch pen (included)



V-type anvil
(included)
for cylinders with
diameter Ø4~60mm



small V-type anvil
(optional)
for cylinders with
diameter Ø2~4mm

automatic testing



SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG, HR15N/T, HR30N/T, HR45N/T (with standard indenters)
	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV, HR15W/X/Y, HR30W/X/Y, HR45W/X/Y (with optional indenter)
Preliminary test force	29.4N/3kgf for superficial Rockwell 98N/10kgf for Rockwell
Test force	147.1N/15kgf, 294.2N/30kgf, 441.3N/45kgf, 588N/60kgf, 980N/100kgf, 1471N/150kgf
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	0~60 second
Resolution	0.1HR
Output	USB
Max. workpiece height	220mm
Max. workpiece depth	200mm (from the center of indenter)
Power supply	220V, 50/60Hz **
Dimension	510×260×780mm
Weight	70kg

** Add "-U" on code No. when power supply is 110V, 50/60Hz

STANDARD DELIVERY

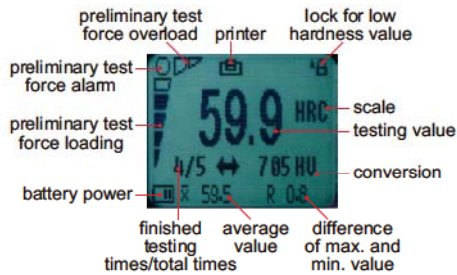
Main unit	1pc
Ø63mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	1pc
Hardness test block HRB88~95	1pc
Hardness test block HRC60~65	1pc
Hardness test block HRC20~30	1pc
Hardness test block 78~88HR15N	1pc
Hardness test block 55~73HR30N	1pc
Hardness test block 57~69HR30T	1pc
USB flash disk (8G)	1pc
Level	1pc
Touch pen	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1
Hardness test block 78~88HR15N	ISH-BHR15N1
Hardness test block 55~73HR30N	ISH-BHR30N1
Hardness test block 57~69HR30T	ISH-BHR30T1
Small V-type anvil	ISH-SMALL ANVIL

DATA
OUTPUT

AUTOMATIC DIGITAL ROCKWELL HARDNESS TESTER CODE ISH-MRD200

software CD
(included)

- Low and high limits with alarm
- Set testing times (2~9) to have average value and the difference of max. and min. value
- Convert to HV or HB automatically
- Memory of 1000 testing values for browsing and output
- Testing value can be sent to wireless printer automatically
- Calibration function compensates the testing value for high accuracy
- The hardness value of soft materials like plastic is not stable.
- The lock function can obtain the value automatically
- Display unit is automatic power off

Ø60mm flat anvil
(included)Ø150mm flat anvil
(included)V-type anvil (included)
for cylinders with diameter
Ø4~60mmsmall V-type anvil (optional)
for cylinders with diameter
Ø2~4mmwireless printer
(optional)

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD HRF, HRG (with standard indenters) HRE, HRH, HRK (with optional indenter)
Preliminary test force	98N
Test force	588N, 980N, 1471N
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	1~99 second
Resolution	0.1HR
Output	wireless and USB
Memory	1000
Max. workpiece height	170mm
Max. workpiece depth	165mm (from the center of indenter)
Power supply of the display unit	built-in rechargeable battery
Power supply	220V, 50/60Hz **
Dimension	520×160×700mm
Weight	60kg

** Add "-U" on code No. when power supply is 110V, 50/60Hz

STANDARD DELIVERY

Main unit	1pc
Ø60mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	1pc
Hardness test block HRB88~95	1pc
Hardness test block HRC60~65	1pc
Hardness test block HRC20~30	1pc
Anti-dust cover	1pc
USB cable and software	1pc
AC/DC adapter	1pc

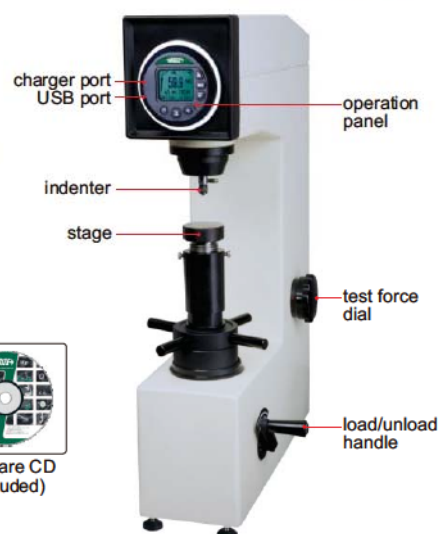
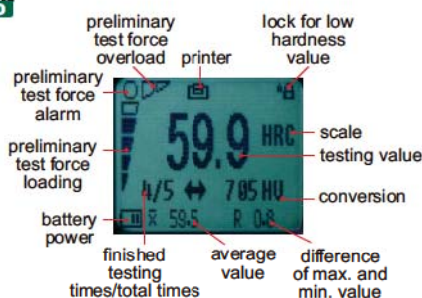
OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
Ø3.175mm carbide ball indenter	ISH-EHK-INDENTER
Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1
Small V-type anvil	ISH-SMALL ANVIL

DATA
OUTPUT

VIDEO

- Low and high limits with alarm
- Set testing times (2~9) to have average value and the difference of max. and min. value
- Convert to HV or HB automatically
- Memory of 1000 testing values for browsing and output
- Testing value can be sent to wireless printer automatically
- Calibration function compensates the testing value for high accuracy
- The hardness value of soft materials like plastic is not stable. The lock function can obtain the value automatically
- Automatic power off

Ø60mm flat anvil
(included)Ø150mm flat anvil
(included)V-type anvil
(included) for
cylinders with
diameter Ø4~60mmsmall V-type anvil
(optional) for
cylinders with
diameter Ø2~4mmwireless printer
(optional)software CD
(included)

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD HRF, HRG (with standard indenters) HRE, HRH, HRK (with optional indenter)
Preliminary test force	98N
Test force	588N, 980N, 1471N
Stage elevation	manual
Load control	manual
Resolution	0.1HR
Output	wireless and USB
Memory	1000
Max. workpiece height	170mm
Max. workpiece depth	165mm (from the center of indenter)
Power supply	built-in rechargeable battery
Dimension	520×160×700mm
Weight	60kg

STANDARD DELIVERY

Main unit	1pc
Ø60mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	1pc

Hardness test block HRB88~95	1pc
Hardness test block HRC60~65	1pc
Hardness test block HRC20~30	1pc
Anti-dust cover	1pc
USB cable and software	1pc
AC/DC adapter	1pc

OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
Ø3.175mm carbide ball indenter	ISH-EHK-INDENTER
Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1
Small V-type anvil	ISH-SMALL ANVIL

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N
Test force	588N, 980N, 1471N
Display	analogue
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	1~99 second
Min. reading	0.5HR
Max. workpiece height	170mm
Max. workpiece depth	165mm (from the center of indenter)
Power supply	220V, 50/60Hz **
Dimension	520×160×700mm
Weight	60kg

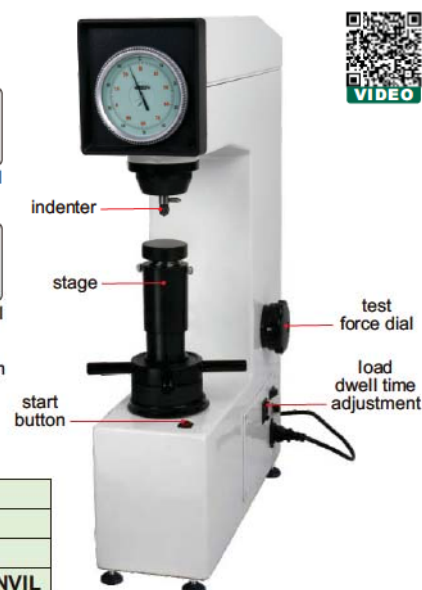
STANDARD DELIVERY

Main unit	1pc
Ø60mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	1pc
Hardness test block HRB88~95	1pc
Hardness test block HRC60~65	1pc
Hardness test block HRC20~30	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1
Small V-type anvil	ISH-SMALL ANVIL

** Add "-U" on code No. when power supply is 110V, 50/60Hz

AUTOMATIC ROCKWELL HARDNESS TESTER
CODE ISH-MR150Ø60mm flat anvil
(included)Ø150mm flat anvil
(included)V-type anvil
(included) for
cylinders with
diameter Ø4~60mmsmall V-type anvil
(optional) for
cylinders with
diameter Ø2~4mm

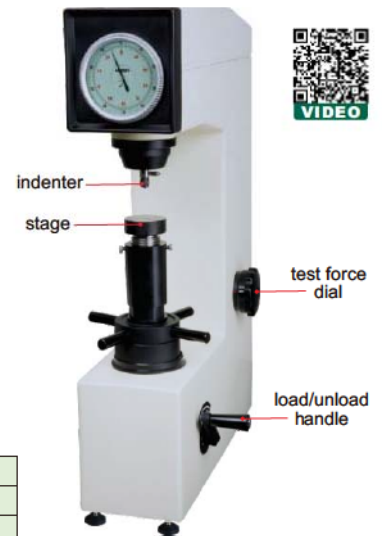
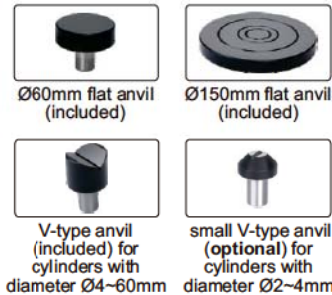
VIDEO

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N
Test force	588N, 980N, 1471N
Display	analogue
Stage elevation	manual
Load control	manual
Min. reading	0.5HR
Max. workpiece height	170mm
Max. workpiece depth	165mm (from the center of indenter)
Dimension	520×160×700mm
Weight	60kg

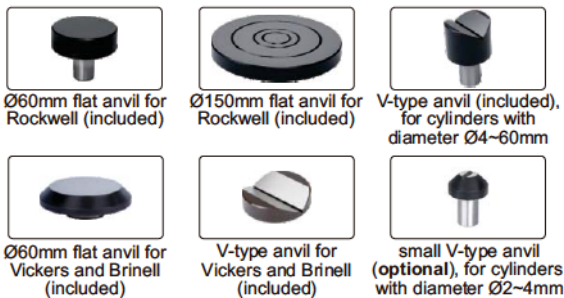
STANDARD DELIVERY

Main unit	1pc
Ø60mm flat anvil	1pc
Ø150mm flat anvil	1pc
V-type anvil	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	1pc
Hardness test block HRB88~95	1pc
Hardness test block HRC60~65	1pc
Hardness test block HRC20~30	1pc
Anti-dust cover	1pc

MANUAL ROCKWELL HARDNESS TESTER
CODE ISH-R150INSPECTION
CERTIFICATE

OPTIONAL ACCESSORY

Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1
Small V-type anvil	ISH-SMALL ANVIL

BRINELL/ROCKWELL/VICKERS HARDNESS TESTER
CODE ISH-BRVINSPECTION
CERTIFICATE

SPECIFICATION

Rockwell test load	98N preload, 588, 980, 1471N total load
Min. Rockwell reading	0.5HR
Brinell test load	306, 613, 1839N
Vickers test load	294N
Stage elevation	manual
Load control	manual
Magnification of microscope	37.5X/75X (selectable)
Max. workpiece height	180mm
Max. workpiece depth	200mm (from the center of indenter)
Power supply	220V, 50/60Hz **
Dimension	546×300×767mm
Weight	90kg

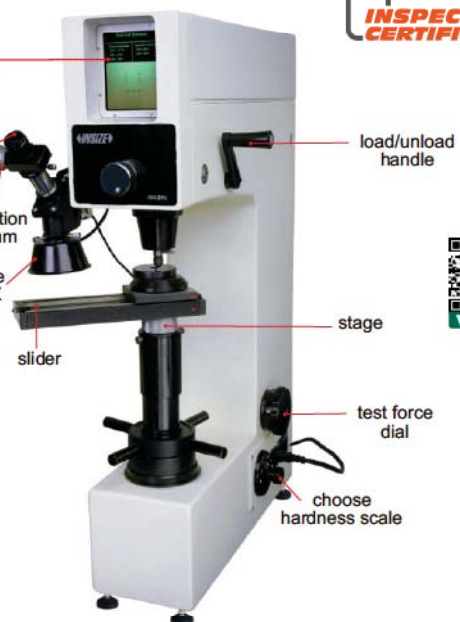
STANDARD DELIVERY

Main unit	1pc
Ø1.5875mm carbide ball indenter	1pc
Diamond Rockwell indenter	1pc
Ø5mm Brinell indenter	1pc
Ø2.5mm Brinell indenter	1pc
Vickers indenter	1pc
Ø60mm flat anvil for Rockwell	1pc
Ø150mm flat anvil for Rockwell	1pc
V-anvil for Rockwell	1pc
Ø60mm flat anvil for Vickers and Brinell	1pc
V-type anvil for Vickers and Brinell	1pc
Hardness test block HRB88~95	1pc

** Add "-U" on code No. when power supply is 110V, 50/60Hz

projection screen with scale, for
reading Rockwell hardnessmicroscope for
Vickers and Brinell
15X eyepiecegraduation
0.01mm
objective
2.5X/5X

slider



Hardness test block HRC60~65	1pc
Hardness test block HRC20~30	1pc
Hardness test block 400~500HV30	1pc
Hardness test block 180~200HBW2.5/187.5	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Hardness test block HRB88~95	ISH-BHRB
Hardness test block HRC60~65	ISH-BHRC3
Hardness test block HRC20~30	ISH-BHRC1
Hardness test block 400~500HV30	ISH-BHV30
Hardness test block 180~220HBW2.5/187.5	ISH-BHB25B
Small V-type anvil	ISH-SMALL ANVIL

AUTOMATIC TESTING AFTER PRELIMINARY TEST FORCE IS LOADED BY HAND

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

INSPECTION CERTIFICATE

- LCD touch screen, easy operation
- Automatic testing after preliminary test force is loaded by hand
- Measure indentation diameter by measuring microscope, input the diameters, the hardness value is shown on screen automatically
- Force loading by electric motor, without weights



VIDEO

SPECIFICATION

Range	8~650HBW
Reading mode	directly read from LCD
Test force	62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf
Max. height of workpiece	230mm
Max. depth of workpiece	160mm (from the center of indenter)
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	5~60 second
Measuring microscope	magnification 20X graduation 0.01mm
Power supply	220V, 50/60Hz**
Dimension	550×210×750mm
Weight	90kg

** Add "-U" on code No. when power supply is 110V, 50/60Hz

OPTIONAL ACCESSORY

Hardness test block 150~250HBW2.5/187.5	ISH-BHB25B
Hardness test block 75~125HBW10/1000	ISH-BHB10A
Hardness test block 175~250HBW10/3000	ISH-BHB10B
Brinell indentation measuring system	ISHB-TSA/TSB

AUTOMATIC BRINELL HARDNESS TESTER CODE ISHB-M100



STANDARD DELIVERY

Main unit	1pc
Ø80mm flat anvil	1pc
Ø180mm flat anvil	1pc
V-type anvil	1pc
Ø2.5mm carbide ball indenter	1pc
Ø5mm carbide ball indenter	1pc

Ø10mm carbide ball indenter	1pc
Hardness test block 150~250HBW2.5/187.5	1pc
Hardness test block 75~125HBW10/1000	1pc
Hardness test block 175~250HBW10/3000	1pc
Measuring microscope	1pc
Anti-dust cover	1pc

INSPECTION CERTIFICATE

AUTOMATIC TESTING AFTER PRELIMINARY TEST FORCE IS LOADED BY HAND

- Automatic testing after preliminary test force is loaded by hand
- Measure indentation by measuring microscope then read the hardness value from LCD
- Can take tests up to 40 times and display maximum, minimum and average value
- Converted to HRA, HRB, HRC, HRD, HRF, HV, HK, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Force loading by electric motor, without weights

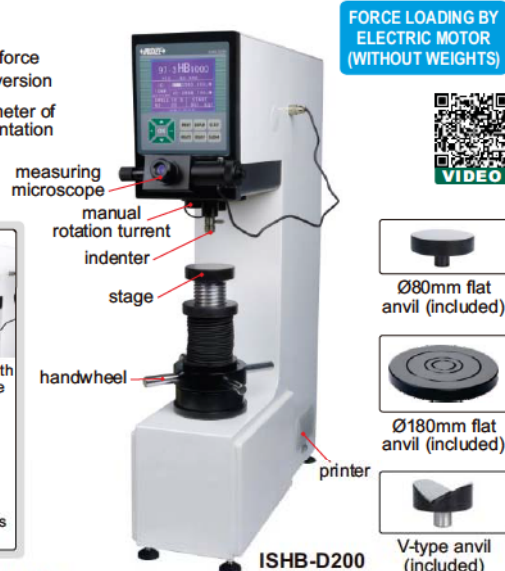
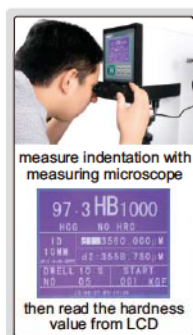
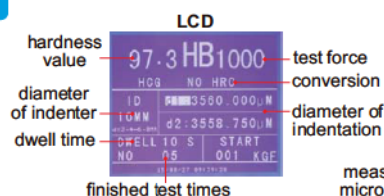
SPECIFICATION

Code	ISHB-D200	ISHB-D300
Turret rotation	manual	automatic
Range	8~650HBW	
Reading mode	directly read from LCD	
Test force	62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf	
Max. height of workpiece	200mm	
Max. depth of workpiece	135mm (from the center of indenter)	
Stage elevation	manual	
Load control	automatic (load/dwell/unload)	
Load dwell time	5~60 second	
Measuring microscope	magnification 20X resolution 0.625mm	
Power supply	220V, 50/60Hz**	
Dimension	550×210×750mm	
Weight	90kg	

OPTIONAL ACCESSORY

Hardness test block 150~250HBW2.5/187.5	ISH-BHB25B
Hardness test block 75~125HBW10/1000	ISH-BHB10A
Hardness test block 175~250HBW10/3000	ISH-BHB10B
Brinell indentation measuring system	ISHB-TSA/TSB

AUTOMATIC DIGITAL BRINELL HARDNESS TESTERS



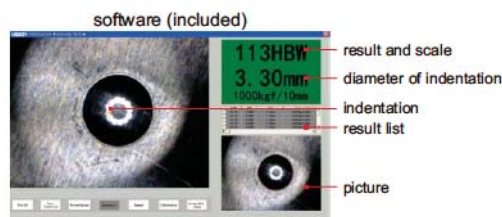
STANDARD DELIVERY

Main unit	1pc
Ø80mm flat anvil	1pc
Ø180mm flat anvil	1pc
V-type anvil	1pc
Ø2.5mm carbide ball indenter	1pc
Ø5mm carbide ball indenter	1pc

Ø10mm carbide ball indenter	1pc
Hardness test block 150~250HBW2.5/187.5	1pc
Hardness test block 75~125HBW10/1000	1pc
Hardness test block 175~250HBW10/3000	1pc
Anti-dust cover	1pc

** Add "-U" on code No. when power supply is 110V, 50/60Hz

BRINELL INDENTATION MEASURING SYSTEM



- Connected to computer USB port
- Automatically measure the indentation
- Result saved to Excel automatically
- Low and high limits with judgement
- Calibration with indentation on standard hardness block



ISHB-TSA

application



software CD (included)

STANDARD DELIVERY

Main unit	1pc
Software and dongle	1pc of each

SPECIFICATION

Code	ISHB-TSA	ISHB-TSB
Applicable Brinell indenter	Ø10mm	Ø2.5mm, Ø5mm
Hardness range	8~650HB	
Range of indentation diameter	Ø2.4~6mm	Ø0.6~3mm
Test force	100, 250, 500, 1000, 1500, 3000kgf	62.5, 125, 187.5, 250, 750kgf
Hardness resolution	1HB	
Length resolution	0.01mm	
Length accuracy	±1%(diameter of indentation)	
Camera	Sensor	1/3.2" CMOS
	Pixel	2M (resolution 1024x768)
	View field	9×6.8mm 4.5×3.4mm
Dimension	170×54×54mm	
Weight	420g	

- Based on Vickers (HV), can be converted to HRA, HRB, HRC, HRD, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T, HK, HBW
- Can take tests up to 99 times, display average value and the difference of max. and mini. value
- Low and high limits with judgement
- Also for Knoop hardness test, Knoop indenter is needed (optional)



slice holder (included)



vice (included)



cylinder holder (included)



level (included)

AUTOMATIC DIGITAL MICRO-VICKERS HARDNESS TESTER
CODE ISHV-D120

conversion	hardness value
indentation diagonals	test force
low and high limits	load dwell time
	finished test times
average value	difference of max. and mini. value

SPECIFICATION

Range		10~3000HV
Test force		0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1kgf
Vickers scales		HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1
Load control		automatic (load/dwell/unload)
Load dwell time		0~60 second
Eyepiece	magnification	10X
	resolution	0.01μm (D≥10μm), 0.001μm (D<10μm) D is diagonal length of indentation
Objective		10X, 40X
Total magnification		100X (for observation), 400X (for measurement)
Max. height of workpiece		210mm
Max. depth of workpiece		135mm (from the center of indenter)
X-Y stage		dimension: 100×100mm, travel range: 25×25mm, graduation: 0.01mm
Power supply		220V, 50/60Hz **
Dimension		490×320×530mm
Weight		45ka

STANDARD DELIVERY

Main unit	1pc
Micro Vickers indenter	1pc
Hardness test block (400~500HV0.2)	1pc
Hardness test block (700~800HV1)	1pc
Slice holder	1pc
Vice	1pc
Cylinder holder	1pc
Level	1pc
Anti-dust cover	1pc

OPTIONAL ACCESSORY

Hardness test block (400~500HV0.2)	ISH-BHV02A
Hardness test block (700~800HV1)	ISH-BHV1
Knoop indenter	ISHV-D120-KNOOP
Measuring system	9631-130
Camera adapter	ISHV-D120-ADAPTER

** Add "U" on code No. when power supply is 110V, 50/60Hz

DIGITAL VICKERS HARDNESS TESTERS

- Based on Vickers (HV), converted to Rockwell (HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRK), Brinell (HB), Superficial Rockwell (HR15N, HR15T, HR30N, HR30T, HR45N, HR45T), Shore (HS) and Strength (MPa)
- Memory of 27 measurement values for print, browsing and output
- LCD display with backlight
- Can measure Knoop hardness, Knoop indenter is needed



VIDEO



SPECIFICATION

Code	ISH-DV10	ISH-DV50
Measuring range	8HV0.3 ~ 2500HV10	5HV1 ~ 2500HV50
Test force	0.3, 0.5, 1, 3, 5, 10kgf	1, 5, 10, 20, 30, 50kgf
Accuracy	±3%	±3% (test force 1, 5, 10, 20kgf) ±2% (test force 30, 50kgf)
Eyepiece	magnification	10X
	resolution	0.0625µm
Objective	10X, 20X	10X
Total magnification	100X (for observation) 200X (for measuring)	100X (for measuring)
Stage elevation	manual	
Load control	automatic (load/dwell/unload)	
Dwell time	5~60 second	
Max. workpiece height	160mm	
Max. workpiece depth	135mm	
Data output	RS232C	
Power supply	220V, 50/60Hz **	
Dimension	540×270×650mm	
Weight	35kg	45kg

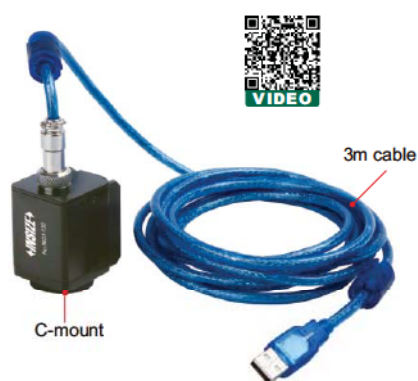
STANDARD DELIVERY

Main unit	1pc	10X objective	1pc
Ø60mm flat anvil	1pc	20X objective	1pc (for ISH-DV10)
Ø150mm flat anvil	1pc	Vickers test block	2pcs
V-type anvil	1pc	Anti-dust cover	1pc
Vickers indenter	1pc		

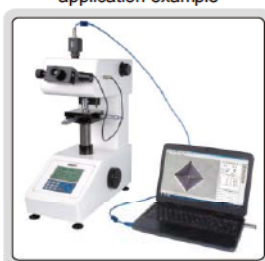
OPTIONAL ACCESSORY

Knoop indenter	ISH-KNOOP
Measuring system	9631-130
Hardness test block 400~500HV5	ISH-BHV5B
Hardness test block 400~500HV10	ISH-BHV10A
Hardness test block 400~500HV30	ISH-BHV30
Camera adapter	ISH-DV-ADAPTER

** Add "U" on code No. when power supply is 110V, 50/60Hz

VICKERS HARDNESS MEASURING SYSTEM
CODE 9631-130

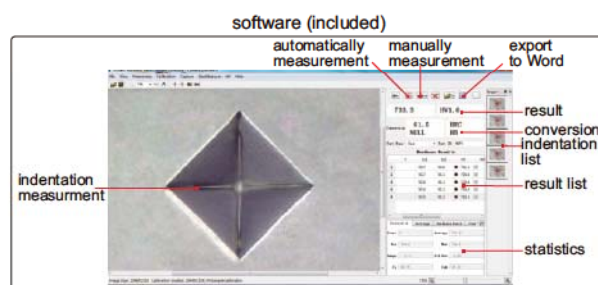
application example



SPECIFICATION

Sensor	1/2" CMOS
Pixel	1.3M (resolution 1280×1024)
Hardness measurement resolution	0.1HV
Length measurement resolution	0.1µm
Hardness measurement accuracy	±3%
Test force	0.01, 0.025, 0.05, 0.1, 0.2, 0.3, 0.5, 1, 2, 2.5, 3, 5, 10, 20, 30, 50, 100kgf
Dimension	36×33×32mm
Weight	500g

- Connected to computer USB port
- Measure the indentation size automatically or manually
- Multiple measurements to have average value, max. value and min. value
- Low and high limits with judgement
- Convert to HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRK, HR15T/30T/45T, HR15N/30N/45N, HK, HV, HB, HS, HSD
- Calibration with standard test block
- Measurement result can be exported to Word or Excel



STANDARD DELIVERY

Main unit	1pc
USB dongle	1pc
USB cable and software	1pc



software CD (included)



DATA
OUTPUT

ULTRASONIC HARDNESS TESTER (ADVANCED MODEL) CODE ISHU-460

Application:

1. For steel, non-ferrous metal and alloy
2. Test surface hardening layers (carburized, nitriding, high frequency hardened, etc.) and plating (like chrome plating)
3. Suitable for thin wall or edge of workpieces
4. Suitable for small areas like arc, conical surface and other complex shapes
5. Suitable for small or light workpieces
6. Suitable for narrow spaces, like grooves and blind holes
7. Test large workpieces at any direction
8. Suitable for rough surfaces



VIDEO



cover



test flat surfaces
(with the cover)



test cylinder surfaces
(use V-groove
on the cover)



test narrow areas
(remove the cover)



software CD
(included)

- Small test indentation
- Test force and time are not affected by the operator
- Quick test, only 2 seconds
- Memory of 1000 test results
- Automatic power off
- Anti-dust and waterproof

SPECIFICATION OF MAIN UNIT

Hardness scale		HV, HB, HRB, HRC, HS, MPa
Range		100~940HV, 80~650HB, 20~93HRB, 20~70HRC, 25~100HS, 370~1740MPa
Resolution		1HV, 1HB, 1HRB, 0.1HRC, 1HS
Accuracy	HB	±3%
	HV	±3%
	HRC	±1.5%
Data output		USB
Operating temperature		-20°C ~ +40°C
Power supply		built-in rechargeable battery
Dimension and weight of main unit		160×80×40mm, 315g

SPECIFICATION OF PROBE

Type	A (standard)	B (optional)
Measuring force	50N	10N (small force)
Application	general use	plating
Maximum roughness of workpiece (Ra)	2.5μm	1.5μm
Minimum weight of workpiece (direct measurement)	0.1kg *	0.1kg *
Minimum thickness of workpiece (direct measurement)	1mm *	1mm *
Minimum radius of workpiece (direct measurement)	5mm	5mm
Minimum thickness of surface hardening layer or plating	0.1mm	0.03mm
Minimum measuring area	Ø1mm	Ø1mm
Dimension and weight of probe	140×Ø37mm, 271g	145×Ø37mm, 271g

STANDARD DELIVERY

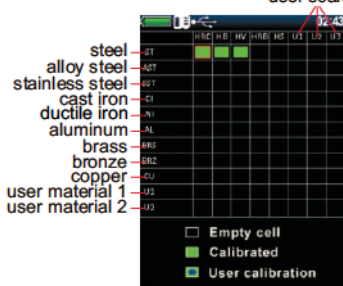
Main unit	1pc
Probe A	1pc
AC/DC adapter	1pc
USB cable and software	1pc

OPTIONAL ACCESSORY

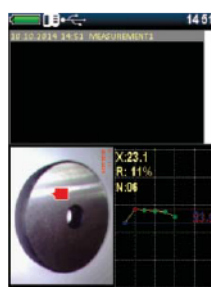
Probe B	ISHU-460-B
Couplant	ISH-COUPPLANT

* If the weight or thickness of workpiece is less than required, the workpiece should be fixed or coupled on solid support.

user scales



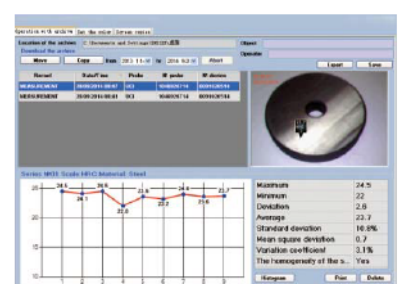
select the material and scale, use the corresponding standard hardness blocks or workpieces for calibration (calibration of HRC, HB and HV for steel are already made, calibration is needed before use other materials and scales)



can take a picture on the workpiece and get a report with testing result and picture, the report can be sent to computer



back



software (included), output data, make and print reports, screen capture, set screen colors of hardness tester



Graph display mode, show average value, relative range and test times



Histogram display mode, show average value, relative range and relative standard deviation



Statistics display mode, show maximum, minimum, deviation, average, relative range and test times



Smart display mode, can set tolerance, automatically reject the result when out of tolerance

ULTRASONIC/LEEB HARDNESS TESTER (ADVANCED MODEL) CODE ISHU-470

DATA
OUTPUTINSPECTION
CERTIFICATE

Application and features:

1. For steel, non-ferrous metal and alloy
2. Test surface hardening layers (carburized, nitriding, high frequency hardened, etc.) and plating (like chrome plating)
3. Suitable for thin wall or edge of workpieces
4. Suitable for small areas like arc, conical surface and other complex shapes
5. Suitable for small or light workpieces
6. Suitable for narrow spaces, like grooves and blind holes
7. Test large workpieces at any direction
8. Suitable for rough surfaces
9. Small test indentation
10. Test force and time are not affected by the operator
11. Quick test, only 2 seconds

Ultrasonic
hardness tester

Application and features:

1. Suitable for large and heavy workpieces, such as casting parts, molds, machine guides, etc.
2. For steel, non-ferrous metal and alloy
3. Based on Leeb (HLD), converted to Rockwell (HRC), Vickers (HV), Brinell (HB) and strength (MPa)
4. Impact direction is adjustable
5. According to ASTM A956

Leeb hardness tester

main unit
(included)ultrasonic probe A
(included)Leeb probe type D
(included)

- Automatic detect the ultrasonic probe or Leeb probe type D
- Memory of 1000 test results for browsing and output
- Automatic power off
- Anti-dust and waterproof

software CD
(included)ultrasonic probe to
test flat surfaces
(with the cover)ultrasonic probe to test
cylinder surfaces (use
V-groove on the cover)ultrasonic probe to
test narrow areas
(remove the cover)Graph display mode, show
average value, relative
range and test timesHistogram display mode,
show average value,
relative range and relative
standard deviationStatistics display mode,
show maximum, minimum,
deviation, average,
relative range and test times

APPLICATION OF ULTRASONIC HARDNESS TESTER AND LEEB HARDNESS TESTER

Application	Ultrasonic	Leeb
Solid parts, molds, etc.	well suited	especially suited
Coarse grain materials, cast iron parts, etc.	not recommended	especially suited
Steel and aluminum cast alloys	suited sometimes	especially suited
HAZ with welds	especially suited	not recommended
Tubes: wall thickness > 10 mm	especially suited	especially suited
Tubes: wall thickness < 10 mm	especially suited	not recommended
Rough surfaces	not recommended	well suited
Thin workpieces	especially suited	not recommended
Difficult to access positions, like turbine blades, gears, etc.	especially suited	well suited

SPECIFICATION OF MAIN UNIT

Hardness scale	HV, HB, HRB, HRC, HS, HL, MPa	
Range	100~940HV, 80~650HB, 20~93HRB, 20~70HRC, 25~100HS, 170~960HL, 370~1740MPa	
Resolution	1HV, 1HB, 1HRB, 0.1HRC, 1HS, 1HL, 1MPa	
Accuracy of ultrasonic test	HB	±3%
	HV	±3%
	HRC	±1.5%
Accuracy of Leeb test	HL	±6HL
Data output	USB	
Operating temperature	-20°C ~ +40°C	
Power supply	built-in rechargeable battery	
Dimension of main unit	160×80×40mm	
Weight of main unit	315g	

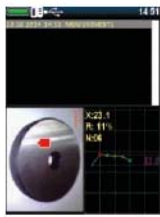
SPECIFICATION OF PROBE

Type	ultrasonic A (standard)	ultrasonic B (optional)	Leeb type D (standard)
Test force	50N	10N (small force)	-
Application	general use	plating	large and heavy workpieces
Maximum roughness of workpiece (Ra)	2.5μm	1.5μm	1.6μm
Minimum weight of workpiece (direct measurement)	0.1kg*	0.1kg*	5kg*
Minimum thickness of workpiece (direct measurement)	1mm*	1mm*	5mm*
Minimum radius of workpiece	5mm	5mm	30mm
Minimum thickness of surface hardening layer or plating	0.1mm	0.03mm	-
Minimum test area	Ø1mm	Ø1mm	Ø20mm
Dimension and weight of probe	140×Ø37mm, 271g	145×Ø37mm, 271g	148×Ø20mm, 100g

* If the weight or thickness of workpiece is less than required, the workpiece should be fixed or coupled on solid support.

To be continued

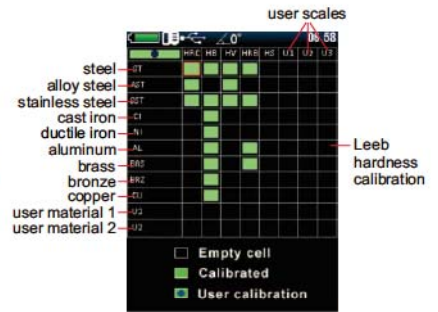
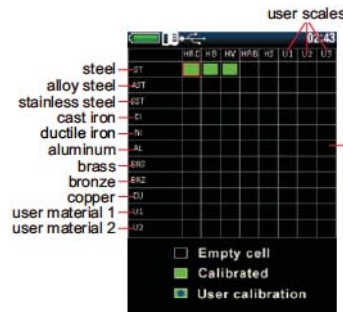
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take a picture on the workpiece and get a report with testing result and picture, the report can be sent to computer



back



select the material and scale, use the corresponding standard hardness blocks or workpieces for calibration ("■" means the calibration is already made, calibration is needed before using other materials and scales)

STANDARD DELIVERY

Main unit	1pc
Ultrasonic probe A	1pc
Leeb probe type D	1pc
Hardness test block D	1pc
AC/DC adapter	1pc
USB cable and software	1pc

OPTIONAL ACCESSORY

Ultrasonic probe B	ISHU-460-B
Leeb support rings	see details
Couplant	ISH-COULPLANT

Application:

1. For steel, non-ferrous metal and alloy
2. Test surface hardening layers (carburized, nitriding, high frequency hardened, etc.) and plating (like chrome plating)
3. Suitable for thin wall or edge of workpieces
4. Suitable for small areas like arc, conical surface and other complex shapes
5. Suitable for small or light workpieces
6. Suitable for narrow spaces, like grooves and blind holes
7. Test large workpieces at any direction
8. Suitable for rough surfaces

- Small test indentation
- Test force and time are not affected by the operator
- Quick test, only 2 seconds
- Average and statistics test modes
- Memory of 1024 test results for browsing and output
- Automatic power off
- Anti-dust and waterproof

SPECIFICATION OF MAIN UNIT

Hardness scale		HV, HB, HRC, MPa
Range		100~940HV, 80~650HB, 20~70HRC, 370~1740MPa
Resolution		1HV, 1HB, 0.1HRC, 1MPa
Accuracy	HB	±3%
	HV	±3%
	HRC	±1.5%
Data output		USB
Operating temperature		-20℃ ~ +40℃
Power supply		built-in rechargeable battery
Dimension of main unit		120×60×25mm
Weight of main unit		200g

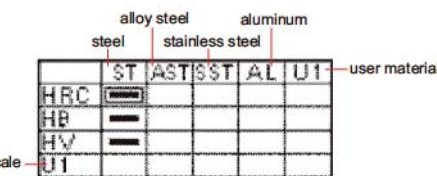
SPECIFICATION OF PROBE

Type	A (standard)	B (optional)
Test force	50N	10N (small force)
Application	general use	plating
Maximum roughness of workpiece (Ra)	2.5μm	1.5μm
Minimum weight of workpiece (direct measurement)	0.1kg *	0.1kg *
Minimum thickness of workpiece (direct measurement)	1mm *	1mm *
Minimum radius of workpiece	5mm	5mm
Minimum thickness of surface hardening layer or plating	0.1mm	0.03mm
Minimum test area	Ø1mm	Ø1mm
Dimension and weight of probe	140×Ø37mm, 271g	145×Ø37mm, 271g

* If the weight or thickness of workpiece is less than required, the workpiece should be fixed or coupled on solid support.



ULTRASONIC HARDNESS TESTER CODE ISHU-330



select the material and scale, use the corresponding standard hardness blocks or workpieces for calibration (calibration of HRC, HB and HV for steel are already made, calibration is needed before use other materials and scales)



software CD (included)



test flat surfaces (with the cover)



test cylinder surfaces (use V-groove on the cover)



test narrow areas (remove the cover)

STANDARD DELIVERY

Main unit	1pc
Probe A	1pc
Rechargeable battery	2pcs
Charger	1pc
USB cable and software	1pc

OPTIONAL ACCESSORY

Probe B	ISHU-460-B
Couplant	ISH-COULPLANT

ULTRASONIC/LEEB HARDNESS TESTER CODE ISHU-340

- Automatic detect the ultrasonic probe or Leeb probe type D
- Average and statistics test modes
- Memory of 1024 test results for browsing and output
- Automatic power off
- Anti-dust and waterproof



main unit
(included)



ultrasonic probe A
(included)



Leeb probe type D
(included)



Ultrasonic hardness
tester

Application and features:

1. For steel, non-ferrous metal and alloy
2. Test surface hardening layers (carburized, nitriding, high frequency hardened, etc.) and plating (like chrome plating)
3. Suitable for thin wall or edge of workpieces
4. Suitable for small areas like arc, conical surface and other complex shapes
5. Suitable for small or light workpieces
6. Suitable for narrow spaces, like grooves and blind holes
7. Test large workpieces at any direction
8. Suitable for rough surfaces
9. Small test indentation
10. Test force and time are not affected by the operator
11. Quick test, only 2 seconds



Leeb hardness tester

Application and features:

1. Suitable for large and heavy workpieces, such as casting parts, molds, machine guides, etc.
2. For steel, non-ferrous metal and alloy
3. Based on Leeb (HLD), converted to Rockwell (HRC), Vickers (HV), Brinell (HB) and strength (MPa)
4. Impact direction is adjustable
5. According to ASTM A956



software CD
(included)



ultrasonic probe to
test flat surfaces
(with the cover)



ultrasonic probe to test
cylinder surfaces (use
V-groove on the cover)



ultrasonic probe to
test narrow areas
(remove the cover)

APPLICATION OF ULTRASONIC HARDNESS TESTER AND LEEB HARDNESS TESTER

Application	Ultrasonic	Leeb
Solid parts, molds, etc.	well suited	especially suited
Coarse grain materials, cast iron parts, etc.	not recommended	especially suited
Steel and aluminum cast alloys	suited sometimes	especially suited
HAZ with welds	especially suited	not recommended
Tubes: wall thickness > 10 mm	especially suited	especially suited
Tubes: wall thickness < 10 mm	especially suited	not recommended
Rough surfaces	not recommended	well suited
Thin workpieces	especially suited	not recommended
Difficult to access positions, like turbine blades, gears, etc.	especially suited	well suited

SPECIFICATION OF MAIN UNIT

Hardness scale		HV, HB, HRC, HL, MPa
Range		100~940HV, 80~650HB, 20~70HRC, 170~960HL, 370~1740MPa
Resolution		1HV, 1HB, 0.1HRC, 1HL, 1MPa
Accuracy of ultrasonic test	HB	±3%
	HV	±3%
	HRC	±1.5%
Accuracy of Leeb test	HL	±6HL
Data output		USB
Operating temperature		-20℃ ~ +40℃
Power supply		built-in rechargeable battery
Dimension of main unit		120×60×25mm
Weight of main unit		200g

STANDARD DELIVERY

Main unit	1pc
Ultrasonic probe A	1pc
Leeb probe type D	1pc
Hardness test block D	1pc
Rechargeable battery	2pcs
Charger	1pc
USB cable and software	1pc

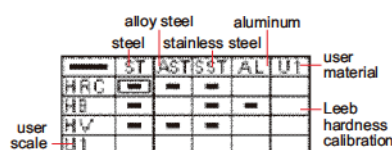
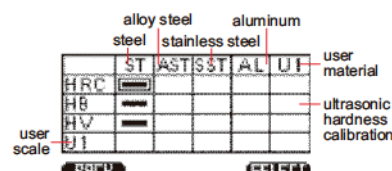
OPTIONAL ACCESSORY

Ultrasonic probe B	ISHU-460-B
Leeb support rings	see details
Couplant	ISH-COUPPLANT

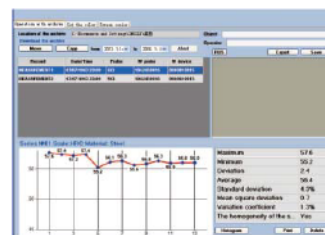
SPECIFICATION OF PROBE

Type	ultrasonic A (standard)	ultrasonic B (optional)	Leeb type D (standard)
Test force	50N	10N (small force)	-
Application	general use	plating	large and heavy workpieces
Maximum roughness of workpiece (Ra)	2.5μm	1.5μm	1.6μm
Minimum weight of workpiece (direct measurement)	0.1kg *	0.1kg *	5kg *
Minimum thickness of workpiece (direct measurement)	1mm *	1mm *	5mm *
Minimum radius of workpiece	5mm	5mm	30mm
Minimum thickness of surface hardening layer or plating	0.1mm	0.03mm	-
Minimum test area	Ø1mm	Ø1mm	Ø20mm
Dimension and weight of probe	140×Ø37mm, 271g	145×Ø37mm, 271g	148×Ø20mm, 100g

* If the weight or thickness of workpiece is less than required, the workpiece should be fixed or coupled on solid support.



select the material and scale, use the corresponding standard hardness blocks or workpieces for calibration (* means the calibration is already made, calibration is needed before using other materials and scales)



software (included). output data, make and print reports



PORTABLE LEEB 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 Portuguese
- Automatic power off
- According to ASTM A 956



software CD (included)



hardness test block D (included)



small support ring (included)



printer (included)

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

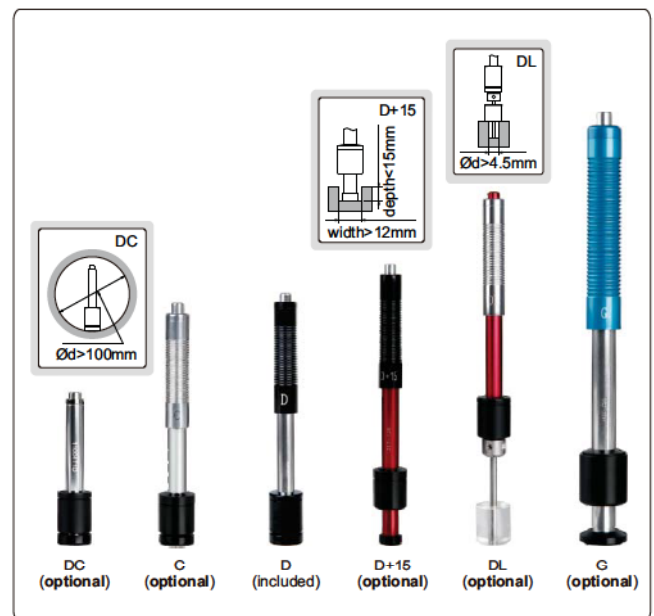
STANDARD DELIVERY

Main unit	1pc
Impact device D	1pc
Printer	1pc
Hardness test block D	1pc
Small support ring	1pc
Cleaning brush	1pc
AC/DC adapter	1pc
USB cable and software disc	1pc
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 D*	ISH-BHLD
Hardness test block G*	ISH-BHLG
Couplant	ISH-COUPPLANT
Support rings	see details

* Hardness test block G (ISH-BHLG) is for impact device G (ISH-SPHA-G).
Hardness test block D (ISH-BHLD) is for all others impact devices.



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)	1.6µm	0.4µm	1.6µm	1.6µm	1.6µm	7µm
Minimum weight of workpiece	direct measurement	5kg	1.5kg	5kg	5kg	15kg
	on solid support	2kg	0.5kg	2kg	2kg	5kg
	coupled on plate	0.1kg	0.02kg	0.1kg	0.1kg	0.5kg
Minimum thickness of workpiece	5mm	1mm	5mm	5mm	5mm	10mm

PORTABLE LEEB HARDNESS TESTER CODE ISH-PHB

SPECIFICATION

Min. reading	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS, 1MPa	
Accuracy	±6HLD (when HLD=800)	
Display	Leeb (HLD), converted hardness, material, impact direction, test times, average value, date	
Output	bluetooth	
Applicable workpiece	minimum weight	5kg
		2kg (on solid support)
		0.1kg (coupled on plate)
	minimum thickness	5mm
	minimum radius of curved surface	30mm
	maximum roughness (Ra)	1.6μm
Power supply	3×AAA batteries	
Dimension	150×84×28mm	
Weight	200g	

STANDARD DELIVERY

Main unit	1pc
Impact device D	1pc
Hardness test block D	1pc
Small support ring	1pc
Cleaning brush	1pc

OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
Couplant	ISH-COUPPLANT
Support rings	see details
Hardness test block D	ISH-BHLD

- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Memory of 99 measurement values for browsing
- Set measurement times (1~9) to have average value
- Connected with printer via bluetooth
- Automatic power off
- According to ASTM A 956



APPLICABLE MATERIAL AND HARDNESS RANGE FOR IMPACT DEVICE D

Material	HLD	HV	HB	HRC	HRB	HS	Tensile strength (MPa)
Steel & cast steel	300-900	81-955	81-654	20-68	38-100	32-100	375-2639
Tool steel	300-840	80-898		20-67			
Stainless steel	300-800	85-802	85-655		46-101		
Cast iron	360-650		93-334				
Cast aluminum alloy	170-570		19-164		23-84		
Brass	200-550		40-173		13-95		
Bronze	300-700		60-290				
Copper	200-690		45-315				

- Impact device D
- Based on Leeb (HLD), converted to Vickers (HV), Brinell (HB), Rockwell (HRC and HRB), Shore (HS) and tensile strength (MPa)
- Automatic direction correction
- Connected with printer via bluetooth
- Connected with computer via USB port
- Up to 500 test results can be saved
- According to ASTM A 956

SPECIFICATION

Min. reading	1HLD, 1HV, 1HB, 0.1HRC, 0.1HRB, 1HS	
Accuracy	±6HLD (when HLD=800)	
Output	USB and bluetooth	
Applicable workpiece	minimum weight	5kg (direct measurement)
		2kg (on solid support)
		0.1kg (coupled on plate)
	minimum thickness	5mm
	minimum radius of curved surface	30mm
	maximum roughness (Ra)	1.6μm
Power supply	built-in rechargeable battery	
Dimension	147×35×22mm	
Weight	65g	

APPLICABLE MATERIAL AND HARDNESS RANGE FOR IMPACT DEVICE D

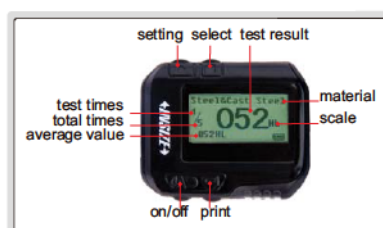
Material	HLD	HV	HB	HRC	HRB	HS
Steel & cast steel	300-900	81-955	81-654	20-68	38-100	32-100
Tool steel	300-840	80-898		20-67		
Stainless steel	300-800	85-802	85-655		46-101	
Cast iron	360-650		93-334			
Cast aluminum alloy	170-570		19-164		23-84	
Brass	200-550		40-173		13-95	
Bronze	300-700		60-290			
Copper	200-690		45-315			



software CD
(included)



PORTABLE LEEB HARDNESS TESTER CODE ISH-SPHD



STANDARD DELIVERY

Main unit	1pc
Printer	1pc
Hardness test block D	1pc
Small support ring	1pc
Cleaning brush	1pc
AC/DC adapter	1pc
USB cable and software disc	1pc

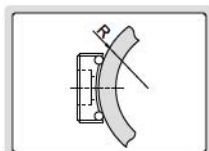
OPTIONAL ACCESSORY

Couplant	ISH-COUPPLANT
Support rings	see details
Hardness test block D	ISH-BHLD

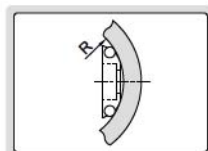


SUPPORT RING SET FOR PORTABLE LEEB HARDNESS TESTER CODE ISH-PH-SP9

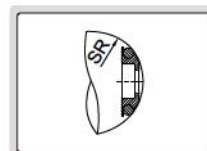
type A



type B



type C



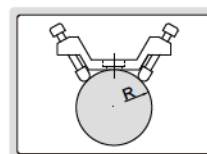
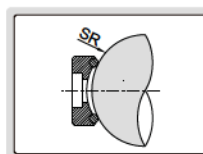
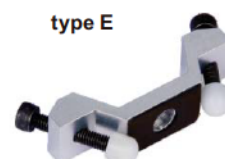
SPECIFICATION

Type	Applicable workpiece	Range (mm)	Quantity
A	cylindrical outside surface	R10-15	3pcs
		R14.5-30	
		R25-50	
B	cylindrical inside surface	R11-13	3pcs
		R12.5-17	
		R16.5-30	
C	spherical inside surface	SR11-13	3pcs
		SR12.5-17	
		SR16.5-30	
D	spherical outside surface	SR10-15	2pcs
		SR14.5-30	
E	cylindrical outside surface	R > 10	1pcs

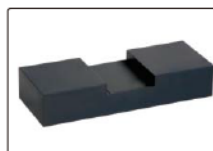
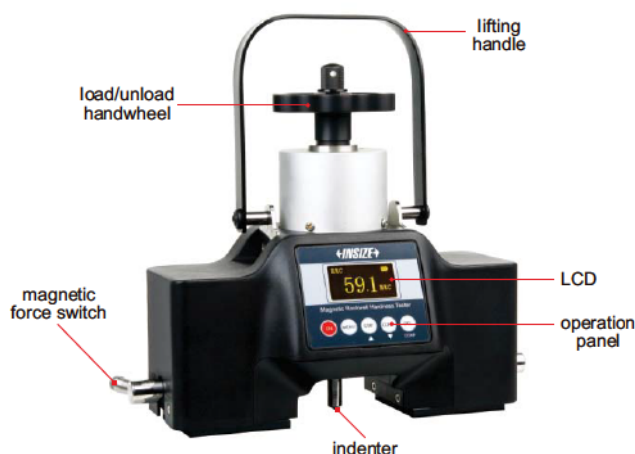
type D



type E



DIGITAL MAGNETIC ROCKWELL HARDNESS TESTER CODE ISHR-D121



flat anvil for test block
(included)

- Apply to large and heavy steel or iron workpieces
- With statistic function, display average, maximum and minimum values
- Convert to HV, HB and tensile strength
- According to ISO 6508, ASTM E18

SPECIFICATION

Hardness scale	HRA, HRB, HRC
Preliminary test force	10kg
Test force	60kg, 100kg, 150kg
Load control	manual
Min. reading	0.1HR
Flat workpiece requirement	length>190mm, width>60mm, thickness>5mm
Cylinder or tube workpiece requirement	length>200mm, diameter>Ø50mm, wall thickness>8mm
Power supply	3×AAA batteries
Dimension	245×105×230mm
Weight	5.3kg

STANDARD DELIVERY

Main unit	1pc
Flat anvil	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	1pc
Hardness test block HRB85-95	1pc
Hardness test block HRC60-70	1pc
Hardness test block HRC20-30	1pc

MAGNETIC ROCKWELL HARDNESS TESTER CODE ISHR-M111

- Apply to large and heavy steel or iron workpieces
- According to ISO 6508, ASTM E18



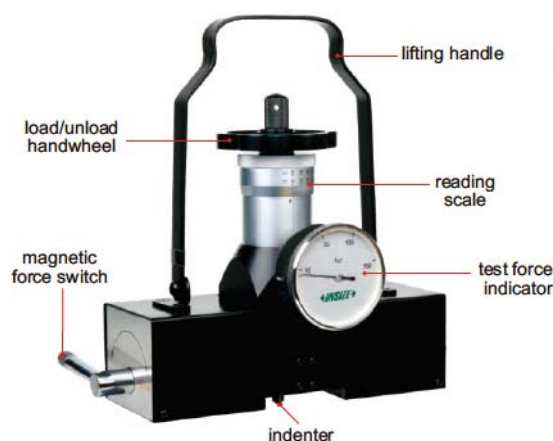
flat anvil for test block
(included)



supports for cylinder or
tube workpieces (included)



magnifier with LED
(included)



VIDEO

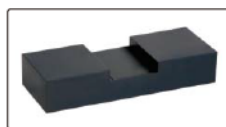
SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	10kg
Test force	60kg, 100kg, 150kg
Load control	manual
Min. reading	1HR
Flat workpiece requirement	length>180mm, width>60mm, thickness>5mm
Cylinder or tube workpiece requirement	length>180mm, diameter>Ø50mm, wall thickness>8mm
Dimension	220×70×220mm
Weight	4.7kg

STANDARD DELIVERY

Main unit	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	2pcs
Hardness test block HRB85~95	1pc
Hardness test block HRC60~70	1pc
Hardness test block HRC20~30	1pc
Flat anvil	1pc
Support	4pcs
Magnifier with LED	1pc

MAGNETIC BRINELL/ROCKWELL HARDNESS TESTER CODE ISHR-B141



flat anvil for test block
(included)



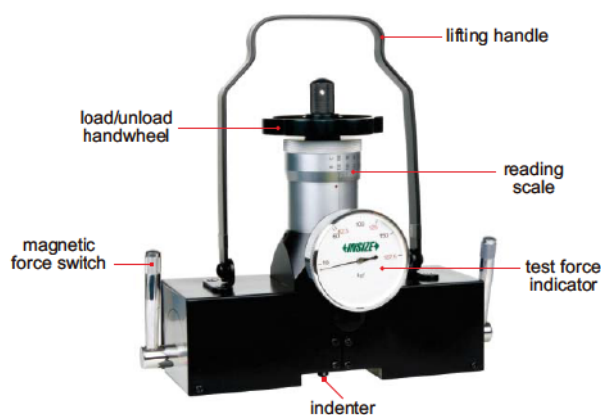
supports for cylinder or
tube workpieces (included)



magnifier with LED
(included)



measuring microscope
(included)



VIDEO

- Apply to large steel or iron workpieces
- According to ISO 6508, ASTM E18

SPECIFICATION

Rockwell scale	HRA, HRB, HRC, HRD, HRF, HRG
Brinell measuring range	20~650HBW
Rockwell test force	10kg preload, 60kg, 100kg, 150kg total load
Brinell test force	62.5kg, 125kg, 187.5kg
Load control	manual
Min. Rockwell reading	1HR
Measuring microscope	40X, graduation 0.01mm
Flat workpiece requirement	length>180mm, width>60mm, thickness>5mm
Cylinder and tube workpiece requirement	length>180mm, diameter>Ø50mm, thickness>8mm
Dimension	220×70×220mm
Weight	4.7kg

STANDARD DELIVERY

Main unit	1pc
Flat anvil	1pc
Support	4pcs
Diamond Rockwell indenter	1pc
Ø1.5875mm carbide ball indenter	1pc
Ø2.5mm Brinell indenter	1pc
Hardness test block HRB85~95	1pc
Hardness test block HRC60~70	1pc
Hardness test block HRC20~30	1pc
Brinell test block	1pc
Measuring microscope	1pc
Magnifier with LED	1pc

- According to ISO 6508, ASTM E18

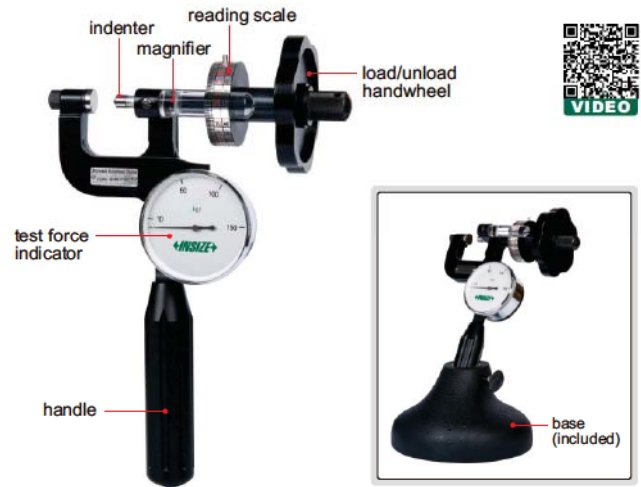
SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	10kg
Test force	60kg, 100kg, 150kg
Load control	manual
Min. reading	1HR
Max. workpiece thickness	25mm
Max. workpiece depth	25mm
Dimension	240×70×160mm
Weight (with base)	2.5kg

STANDARD DELIVERY

Main unit	1pc
Diamond indenter	1pc
Ø1.5875mm carbide ball indenter	2pcs
Hardness test block HRB88~95	1pc
Hardness test block HRC60~65	1pc
Hardness test block HRC20~30	1pc
Flat anvil	1pc
V-type anvil	1pc
Base	1pc
Anvil extension	1pc
Magnifier	2pcs

PORTABLE ROCKWELL HARDNESS TESTER CODE ISHR-P151



flat anvil (included)



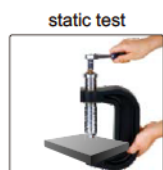
V-type anvil (included)



anvil extension for thin workpieces (included)



- Measure Brinell hardness of large and heavy workpieces
- 1580kg test force and Ø7.26mm ball indenter, equal to 3000kg test force and Ø10mm ball indenter
- Static and impact test modes
- According to ISO and ASTM standard



static test



impact test



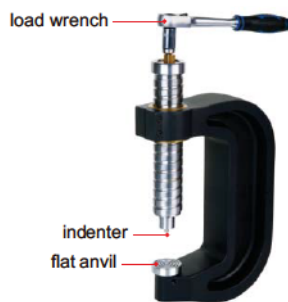
V-type anvil (included)



pins (included)



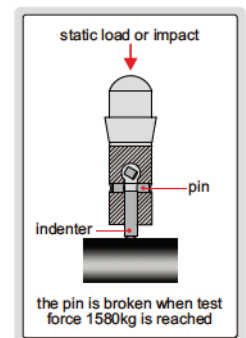
measuring microscope (included)



static test clamp



impact test clamp



PIN BRINELL HARDNESS TESTER CODE ISHB-P101

SPECIFICATION

Measuring range	100~350HBW (with Ø7.26mm indenter, included) 350~650HBW (with Ø4mm indenter, optional)
Test force	1580kg
Accuracy	static test: ±3% impact test: ±5%
Measuring microscope	20X, graduation 0.01mm
Max. workpiece height in static test	150mm
Max. workpiece depth in static test	80mm (from the center of indenter)
Dimension	195×60×350mm
Weight	4.2kg

STANDARD DELIVERY

Static test clamp	1pc
Impact test clamp	1pc
Flat anvil	1pc
V-type anvil	1pc
Ø7.26mm indenter	1pc
Hardness test block	1pc
Pin	250pcs
Measuring microscope	1pc

OPTIONAL ACCESSORY

Ø4mm indenter	ISHB-P101-INDENTER
Pin (250pcs)	ISHB-P101-PIN

HYDRAULIC BRINELL HARDNESS TESTER CODE ISHB-H131

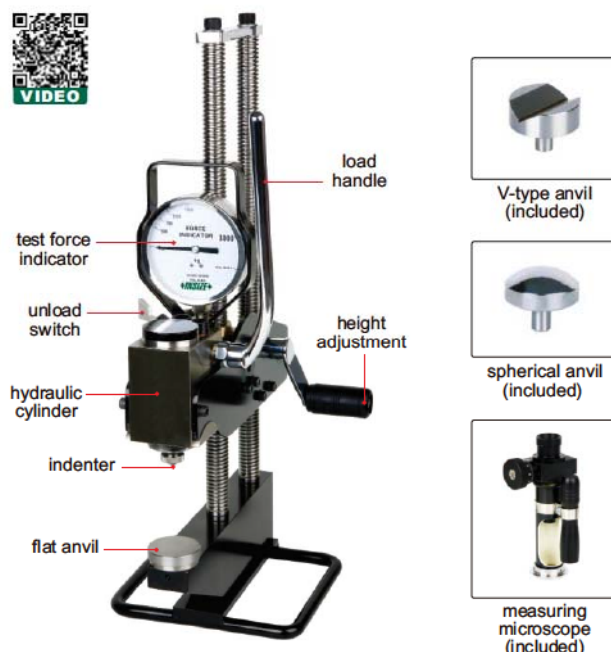
- According to ISO 6506, ASTM E10

SPECIFICATION

Measuring range	16~650HBW
Test force	3000kg
Indenter	Ø10mm carbide ball
Measuring microscope	20X, graduation 0.01mm
Max. workpiece height	350mm
Max. workpiece depth	90mm (from the center of indenter)
Dimension	270×225×570mm
Weight	13.8kg

STANDARD DELIVERY

Main unit	1pc
Flat anvil	1pc
V-type anvil	1pc
Spherical anvil	1pc
Ø10mm carbide ball	2pcs
Brinell test block	2pcs
Measuring microscope	1pc



CHAIN TYPE HYDRAULIC BRINELL HARDNESS TESTER CODE ISHB-C161

- To measure the hardness of cylinders or tubes
- According to ISO 6506, ASTM E10



SPECIFICATION

Measuring range	32~650HBW
Workpiece diameter range	Ø150~Ø500mm
Test force	3000kg
Indenter	Ø10mm carbide ball
Measuring microscope	20X, graduation 0.01mm
Dimension	270×225×570mm
Weight	14.5kg

STANDARD DELIVERY

Main unit	1pc
1.5m chain	1pc
Ø10mm carbide ball	2pcs
Brinell test block	2pcs
Measuring microscope	1pc

BARCOL HARDNESS TESTER CODE ISHB-B300



- To measure the hardness of thick workpieces made of pure aluminum, aluminum alloy, fiber reinforced plastic, hard plastic, etc.
- According to ASTM B648-00, ASTM D2853-07



SPECIFICATION

Hardness range	0~100HBa (equal to 25~150HBW)
Min. reading	1HBa
Accuracy	±2HBa (at 42~52HBa) ±1HBa (at 84~88HBa)
Min. workpiece thickness	0.8mm
Dimension	142×65×90mm
Weight	500g

STANDARD DELIVERY

Main unit	1pc
Spare indenter	2pcs
Hardness test block	2pcs
Wrench	1pc

WEBSTER HARDNESS TESTERS



- To measure the hardness of soft metal such as aluminum alloy, copper, brass, soft steel, etc.
- According to ASTM B647-84 (2000)

STANDARD DELIVERY

Main unit	1pc
Spare indenter	1pc
Hardness test block	1pc
Wrench	1pc

SPECIFICATION

Code	ISHW-L20	ISHW-L20A	ISHW-L20B	ISHW-B70	ISHW-B75	ISHW-B92
Application	for aluminum alloy general use	for aluminum alloy thick workpiece	for aluminum alloy small tube	for hard aluminum alloy and hard brass	for soft brass and copper	for soft steel and cold-rolled steel
Thickness requirement of flat workpiece	0.6~6mm	0.6~13mm	0.6~8mm	0.6~6mm	0.6~6mm	0.6~6mm
Internal diameter requirement of tube workpiece	>Ø10mm	>Ø10mm	>Ø6mm	>Ø10mm	>Ø10mm	>Ø10mm
Wall thickness requirement of tube workpiece	0.6~6mm	6~13mm (internal diameter Ø10~23.3mm) 0.6~6mm (internal diameter >Ø23.3mm)	0.6~8mm	0.6~6mm	0.6~6mm	0.6~6mm
Hardness range	0~20HW					
Min. reading	1HW					
Accuracy	±0.5HW (at 5~17HW)					
Dimension	205×30×85mm					
Weight	500g					



ISHW-L20

DIGITAL SHORE DUROMETERS



- According to ISO868, ISO7619, ASTM D 2240
- Average and peak (max.) mode
- Dwell time is adjustable
- Low and high limits with judgement
- 500 memories
- Wireless connection to printer
- Handhold use or work with test stand (code ISH-DS-STAND)
- Automatic power off

SPECIFICATION

Code	ISH-D5A	ISH-D5D
Unit	Shore A	Shore D
Test material	soft plastic, soft rubber, etc.	hard plastic, hard rubber, etc.
Measuring range*	0~100HA	0~100HD
Resolution	0.1HA	0.1HD
Accuracy	±1HA	±1HD
Indenter protrusion	2.5mm	
Output	wireless and USB	
Power supply	built-in rechargeable battery	
Dimension	153×50×29mm	
Weight	170g	

STANDARD DELIVERY

Main unit	1pc
Calibration block	1pc
USB cable and software	1pc
AC/DC adapter	1pc



software CD (included)



calibration block (included)



printer (optional)

OPTIONAL ACCESSORY

Printer	ISH-DS-PRINTER
Test stand	ISH-DS-STAND
1kg weight block (for ISH-D5A)	ISH-D5A-W1
5kg weight block (for ISH-D5D)	ISH-D5D-W5

* Use ISH-D5D when measuring result is higher than 90HA
Use ISH-D5A when measuring result is lower than 20HD

TEST STAND FOR DIGITAL SHORE DUROMETERS CODE ISH-DS-STAND

- For digital shore durometers (code ISH-DSA and ISH-DSD)
- Can perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations
- 1kg weight block is for ISH-DSA, 5kg weight block is for ISH-DSD

SPECIFICATION

Stage diameter	Ø88mm
Maximum workpiece height	75mm
Dimension	125×163×350mm
Weight	4kg

STANDARD DELIVERY

Test stand	1pc
Durometer supporter	1pc

OPTIONAL ACCESSORY

1kg weight block (for ISH-DSA)	ISH-DSA-W1
5kg weight block (for ISH-DSD)	ISH-DSD-W5



SHORE DUROMETERS

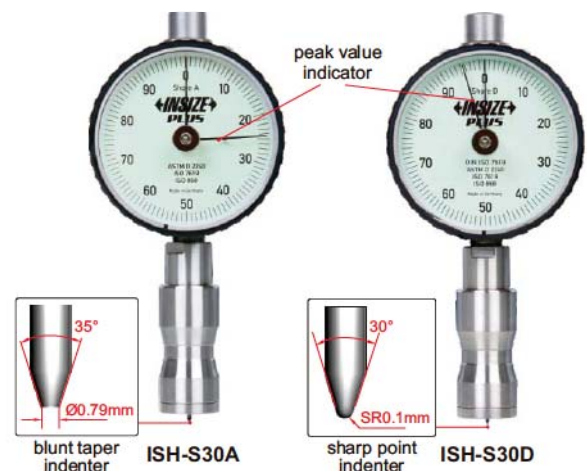
INSIZE PLUS
MADE IN GERMANY

- According to ISO868, ISO7619, ASTM D 2240
- With peak value indicator
- Handhold use or work with test stand (code ISH-OS2)

SPECIFICATION

Code	ISH-S30A	ISH-S30D
Scale	Shore A	Shore D
Test material	soft plastic, soft rubber, etc.	hard plastic, hard rubber, etc.
Measuring range*	0~100HA	0~100HD
Resolution	1HA	1HD
Accuracy	±0.5HA	±0.5HD
Indenter protrusion	2.5mm	
Bezel diameter	57mm	
Overall height	121mm	
Weight	184g	

* Use ISH-S30D when measuring result is higher than 90HA
Use ISH-S30A when measuring result is lower than 20HD



HARDNESS TEST BLOCKS FOR SHORE DUROMETERS

INSIZE PLUS
MADE IN GERMANY

SPECIFICATION

Code	ISH-S30A-BLOCK	ISH-S30D-BLOCK
Type	Shore A	Shore D
Hardness value	7pcs/set: 30, 40, 50, 60, 70, 80, 90HA	3pcs/set: 60, 75, 85HD



ISH-S30A-BLOCK



ISH-S30D-BLOCK

TEST STAND FOR SHORE DUROMETERS CODE ISH-OS2

INSIZE PLUS
MADE IN GERMANY

- For shore durometers (code ISH-S30A and ISH-S30D)
- Can perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations
- Special structure for stable loading
- 1kg weight block is for ISH-S30A, 4kg weight block is for ISH-S30D

SPECIFICATION

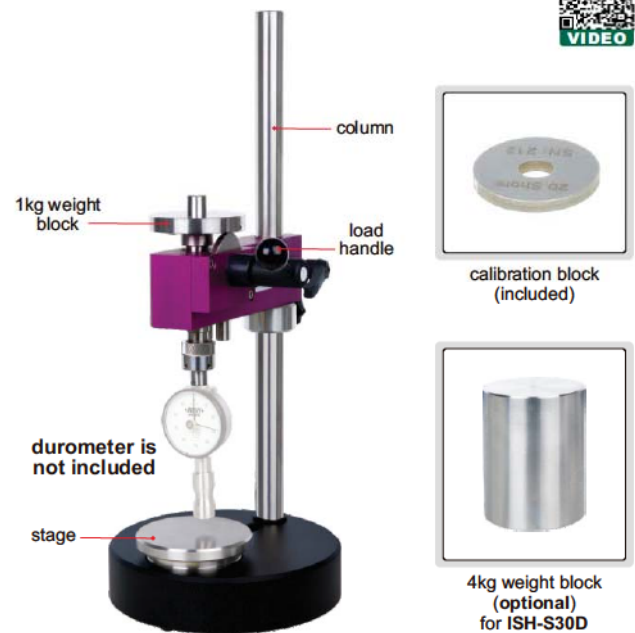
Stage diameter	Ø98mm
Maximum workpiece height	180mm
Maximum workpiece depth	115mm (from test point to column)
Weight block	1kg (for ISH-S30A)
Dimension	Ø200×500mm
Weight	18kg

STANDARD DELIVERY

Test stand	1pc
Calibration block	1pc

OPTIONAL ACCESSORY

4kg weight block (for ISH-S30D)	ISH-OS2-W4
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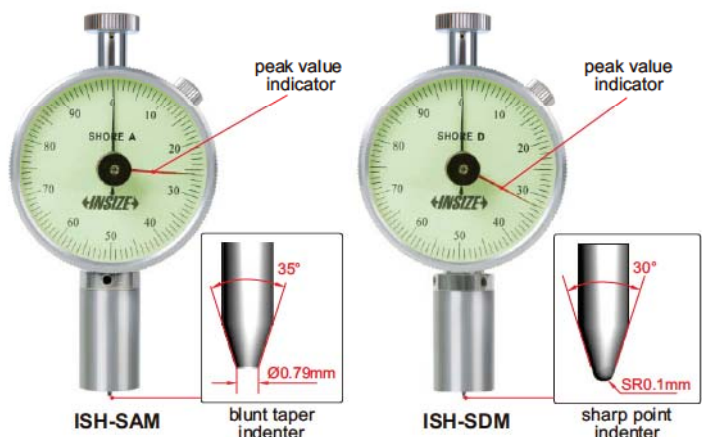
SHORE DUROMETERS

- According to ISO868, ISO7619, ASTM D 2240
- With peak value indicator
- Optional accessory: test stand ISH-STAC and ISH-STD

SPECIFICATION

Code	ISH-SAM	ISH-SDM
Scale	Shore A	Shore D
Application	nature rubber, soft elastomer, etc.	hard rubber, plastic, hard elastomer, etc.
Measuring range *	10~90HA	20~90HD
Graduation	1HA	1HD
Indenter protrusion	2.5mm	
Dimension	115×60×25mm	
Weight	160g	

* Use ISH-SDM when measuring result is higher than 90HA
Use ISH-SAM when measuring result is lower than 20HD



TEST STANDS FOR SHORE DUROMETERS

- For shore durometers (code ISH-SAM and ISH-SDM)
- Perform repeatable hardness measurement due to fewer possibilities of human error or measurement variations

SPECIFICATION

Code	ISH-STAC	ISH-STD
Applicable durometer	ISH-SAM	ISH-SDM
Stage diameter	Ø100mm	Ø100mm
Maximum workpiece height	75mm	75mm
Weight block	1kg	5kg

