



IP54
WATERPROOF

AUDIBLE AND VISUAL
WARNING WHEN OUT OF $\pm 3^\circ$

CROSS-LINE LASER LEVEL CODE 4917-30

- Red horizontal and vertical cross laser lines
- Self-leveling within $\pm 3^\circ$, self-leveling time within 4s, audible and visual warning when out of $\pm 3^\circ$
- Folding legs for angle and height adjustment
- Outdoor use with the detector (code: 4917-DETECTOR)



application examples



folding legs for angle and height adjustment



SPECIFICATION

Laser line width	2 \pm 0.5mm (within 5m)
Laser type	630~660nm, class II, <1mW
Beam angle	120 \pm 0.5 $^\circ$
Self-leveling range	$\pm 3^\circ$
Working distance	indoor: 30m, outdoor: 50m with detector (optional)
Accuracy	0.2mm/m
Operation temperature	-10~40 $^\circ$ C
Power supply	3 \times AA batteries, for 3 hours working
Dimension	100 \times 82 \times 104mm
Weight	620g



stand
(included with outdoor detector)

OUTDOOR DETECTOR (OPTIONAL)

Detecting distance	horizontal 1~50m, vertical 1~30m
Detecting accuracy *	high accuracy ± 1.5 mm, low accuracy ± 2.5 mm
Power supply	9V battery
Dimension	168 \times 58 \times 30mm
Weight	140g (battery included)

* Use high accuracy detection mode within 15m, use low accuracy detection mode over 15m



outdoor detector (optional)

STANDARD DELIVERY

Main unit	1 pc
1/4" to 5/8" tripod adaptor	1 pc
Battery (AA)	3 pcs

OPTIONAL ACCESSORY

Outdoor detector	4917-DETECTOR
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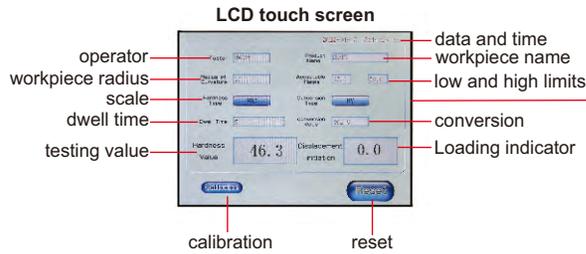
AUTOMATIC DIGITAL ROCKWELL HARDNESS TESTER (DOLPHIN-NOSE TYPE) CODE ISHR-T100



DATA
OUTPUT

FORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHTS)

**INSPECTION
CERTIFICATE**



- Dolphin-nose indenter for easy reach interior of pipes and grooves
- Automatic testing, automatic test force loading
- LCD touch screen, easy operation
- Convert to other Rockwell scales, HV or HB automatically
- Tolerance testing
- Insert USB flash disk, save the testing results as Excel
- Self-compensation of 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	with standard indenters	HRA, HRB, HRC, HRD, HRF, HRG
	with optional indenter	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV
Preliminary test force	98N (10kgf)	
Test force	588N (60kgf), 980N (100kgf), 1471N (150kgf)	
Stage elevation	manual	
Load control	automatic (load/dwell/unload)	
Load dwell time	0~99 second	
Resolution	0.1HR	
Output	USB	
Max. workpiece height	300mm	
Max. testing width	250mm (from the center of indenter to the wall of main body)	
Power supply	220V, 50/60Hz	
Dimension	720×260×840mm	
Weight	80kg	

STANDARD DELIVERY

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

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Small V-type anvil	ISH-SMALLANVIL

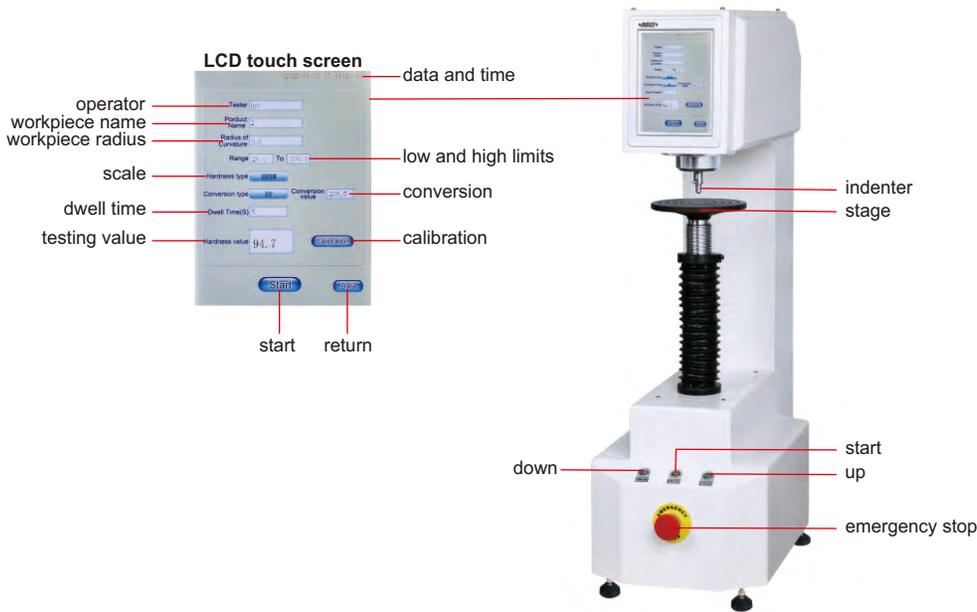
AUTOMATIC DIGITAL ROCKWELL/SUPERFICIAL ROCKWELL HARDNESS TESTERS (FOR MASS PRODUCTION)



AUTOMATIC LIFTING OF STAGE
AUTOMATIC LOADING AND UNLOADING

DATA
OUTPUT

FORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHTS)



HDT-A410



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



desk (optional)

- According to BSEN 6508, ISO 6508, ASTM E18
- Automatic lifting of stage without manual rotation
- Automatic testing, the preliminary and main test force are loaded automatically
- LCD touch screen, easy operation
- Convert to other Rockwell scales, HV or HB automatically
- Tolerance testing
- Insert USB flash disk, save the testing results as Excel
- Self-correcting the hardness value for curved workpieces
- The accuracy can be corrected with three standard blocks of low, medium and high values
- The loading force can be corrected with standard force gages
- Force loading by electric motor (without weights)
- The test force is selected automatically according to hardness scales

To be continued

Continued from previous page

SPECIFICATION

Code		HDT-A410	HDT-A510	HDT-A610
Type		Rockwell	Superficial Rockwell	Rockwell and Superficial Rockwell
Hardness scale	with standard indenters	HRA, HRB, HRC, HRD, HRF, HRG	HR15N, HR30N, HR45N, HR15T, HR30T, HR45T	HRA, HRB, HRC, HRD, HRF, HRG, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
	with optional indenter	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV	HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV, HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y
Preliminary test force		98N/10kgf for Rockwell	29.4N/3kgf for Superficial Rockwell	98N/10kgf for Rockwell 29.4N/3kgf for Superficial Rockwell
Test force		588N (60kg), 980N (100kg), 1471N (150kg)	147.1N (15kg), 294.2N (30kg), 441.3N (45kg)	147.1N (15kg), 294.2N (30kg), 441.3N (45kg), 588N (60kg), 980N (100kg), 1471N (150kg)
Stage lifting		automatic		
Load control		automatic (load/dwell/unload)		
Load dwell time		0~99 second		
Resolution		0.1HR		
Output		USB		
Max. workpiece height		300mm		
Max. testing width		200mm (from the center of indenter to the wall of main body)		
Power supply		220V, 50/60Hz		
Dimension		560×280×850mm		
Weight		80kg		

STANDARD DELIVERY

Code	HDT-A410	HDT-A510	HDT-A610
Main unit	1 pc	1 pc	1 pc
Ø63mm flat anvil	1 pc	1 pc	1 pc
Ø150mm flat anvil	1 pc	1 pc	1 pc
V-type anvil	1 pc	1 pc	1 pc
Diamond indenter	1 pc	1 pc	1 pc
Ø1.5875mm carbide ball indenter	1 pc	1 pc	1 pc
Hardness test block HRB88~95	1 pc	—	1 pc
Hardness test block HRC60~65	1 pc	—	1 pc
Hardness test block HRC20~30	1 pc	—	1 pc
Hardness test block 78~88HR15N	—	1 pc	1 pc
Hardness test block 55~73HR30N	—	1 pc	1 pc
Hardness test block 57~69HR30T	—	1 pc	1 pc
USB flash disk (8G)	1 pc	1 pc	1 pc
Level	1 pc	1 pc	1 pc
Touch pen	1 pc	1 pc	1 pc
Anti-dust cover	1 pc	1 pc	1 pc

OPTIONAL ACCESSORY

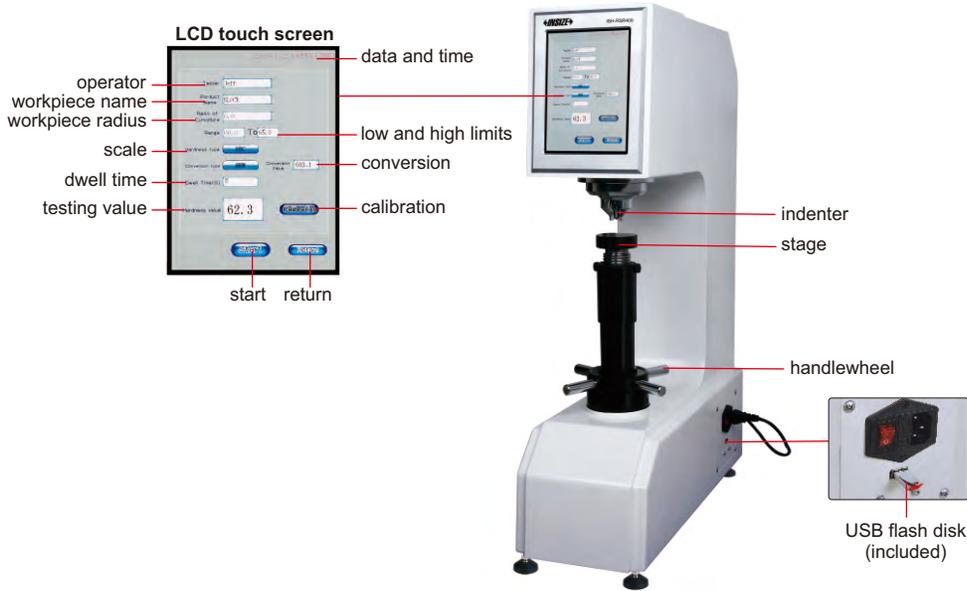
Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block 78~88HR15N	HDT-B-HR15N2
Hardness test block 55~73HR30N	HDT-B-HR30N2
Hardness test block 73~82HR30T	HDT-B-HR30T
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

AUTOMATIC DIGITAL ROCKWELL/SUPERFICIAL ROCKWELL HARDNESS TESTERS

**INSPECTION
CERTIFICATE**

FORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHTS)

DATA
OUTPUT



ISH-RSR40



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



desk (optional)

- Automatic testing, the preliminary and main test force are loaded automatically
- LCD touch screen, easy operation
- Convert to other Rockwell scales, HV or HB automatically
- Tolerance testing
- Insert USB flash disk, save the testing results as Excel
- Self-correcting the hardness value for curved workpieces
- Force loading by electric motor (without weights)
- The test force is selected automatically according to hardness scale
- According to ISO 6508

automatic testing



elevate the stage by hand to let the workpiece touch the indenter protection cover, press "start" to start testing automatically, the preliminary and main test force are loaded automatically

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SPECIFICATION

Code		ISH-RSR400	ISH-RSR500	ISH-RSR600
Type		Rockwell	Superficial Rockwell	Rockwell and Superficial Rockwell
Hardness scale	with standard indenters	HRA, HRB, HRC, HRD, HRF, HRG	HR15N, HR30N, HR45N, HR15T, HR30T, HR45T	HRA, HRB, HRC, HRD, HRF, HRG, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
	with optional indenter	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV	HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y	HRE, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV, HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y
Preliminary test force		98N/10kgf for Rockwell	29.4N/3kgf for Superficial Rockwell	98N/10kgf for Rockwell 29.4N/3kgf for Superficial Rockwell
Test force		588N (60kg), 980N (100kg), 1471N (150kg)	147.1N (15kg), 294.2N (30kg), 441.3N (45kg)	147.1N (15kg), 294.2N (30kg), 441.3N (45kg), 588N (60kg), 980N (100kg), 1471N (150kg)
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. testing width		200mm (from the center of indenter to the wall of main body)		
Power supply		220V, 50/60Hz		
Dimension		510×260×780mm		
Weight		70kg		

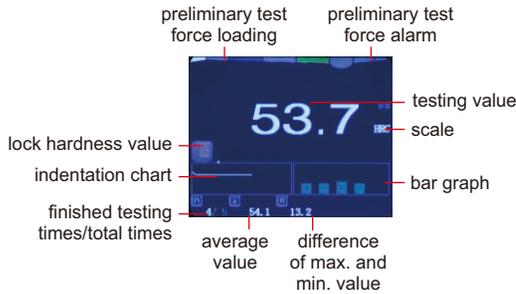
STANDARD DELIVERY

Code	ISH-RSR400	ISH-RSR500	ISH-RSR600
Main unit	1 pc	1 pc	1 pc
Ø63mm flat anvil	1 pc	1 pc	1 pc
Ø150mm flat anvil	1 pc	1 pc	1 pc
V-type anvil	1 pc	1 pc	1 pc
Diamond indenter	1 pc	1 pc	1 pc
Ø1.5875mm carbide ball indenter	1 pc	1 pc	1 pc
Hardness test block HRB88~95	1 pc	—	1 pc
Hardness test block HRC60~65	1 pc	—	1 pc
Hardness test block HRC20~30	1 pc	—	1 pc
Hardness test block 78~88HR15N	—	1 pc	1 pc
Hardness test block 55~73HR30N	—	1 pc	1 pc
Hardness test block 57~69HR30T	—	1 pc	1 pc
USB flash disk (8G)	1 pc	1 pc	1 pc
Level	1 pc	1 pc	1 pc
Touch pen	1 pc	1 pc	1 pc
Anti-dust cover	1 pc	1 pc	1 pc

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block 78~88HR15N	HDT-B-HR15N2
Hardness test block 55~73HR30N	HDT-B-HR30N2
Hardness test block 73~82HR30T	HDT-B-HR30T
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

AUTOMATIC DIGITAL ROCKWELL HARDNESS TESTER CODE ISH-MRD200



software CD (included)

- Tolerance testing
- Set testing times (2~10) to have average value and the difference of max. and min. value
- Convert to other Rockwell scales, HV or HB
- Memory of 500 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
- According to ISO 6508



Ø60mm flat anvil (included)



Ø150mm flat anvil (included)



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



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



wireless printer (optional)



desk (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	500
Max. workpiece height	170mm
Max. testing width	165mm (from the center of indenter to the wall of main body)
Power supply of the display unit	built-in rechargeable battery
Power supply	220V, 50/60Hz
Dimension	520×160×700mm
Weight	60kg

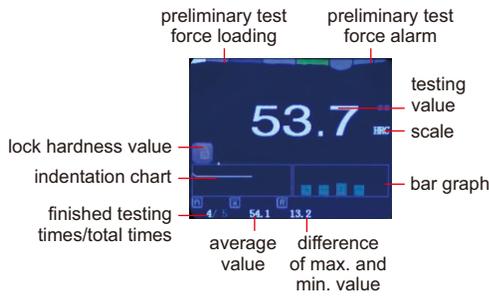
STANDARD DELIVERY

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

OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
Ø3.175mm carbide ball indenter	ISH-EHK-INDENTER
Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

MANUAL DIGITAL ROCKWELL HARDNESS TESTER CODE ISH-RD200



- Tolerance testing
- Set testing times (2~10) to have average value and the difference of max. and min. value
- Convert to other Rockwell scales, HV or HB
- Memory of 500 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
- According to ISO 6508



software CD (included)



Ø60mm flat anvil (included)



Ø150mm flat anvil (included)



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



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



wireless printer (optional)



desk (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	manual
Resolution	0.1HR
Output	wireless and USB
Memory	500
Max. workpiece height	170mm
Max. testing width	165mm (from the center of indenter to the wall of main body)
Power supply	built-in rechargeable battery
Dimension	520×160×700mm
Weight	60kg

STANDARD DELIVERY

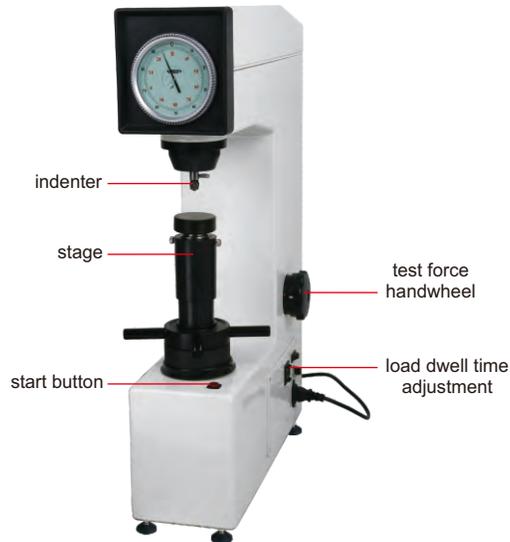
Main unit	1 pc
Ø60mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm carbide ball indenter	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Anti-dust cover	1 pc
Software and USB cable	1 pc
AC/DC adapter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

OPTIONAL ACCESSORY

Wireless printer	ISH-DS-PRINTER
Ø3.175mm carbide ball indenter	ISH-EHK-INDENTER
Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK



VIDEO



■ According to ISO 6508



Ø60mm flat anvil
(included)



Ø150mm flat anvil
(included)



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



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



desk (optional)

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. testing width	165mm (from the center of indenter to the wall of main body)
Power supply	220V, 50/60Hz
Dimension	520×160×700mm
Weight	60kg

STANDARD DELIVERY

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

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

MOTORIZED ROCKWELL HARDNESS TESTER (BASIC TYPE) CODE HDT-RA151



■ According to ISO 6508



Ø58mm flat anvil (included)



Ø150mm flat anvil (included)



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



level (included)



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



desk (optional)

SPECIFICATION

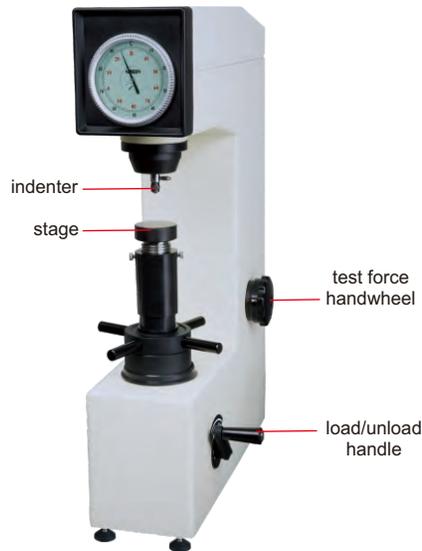
Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N
Test force	588N, 980N, 1471N
Display	analogue
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	1~60 second
Min. reading	0.5HR
Max. workpiece height	170mm
Max. testing width	128mm (from the center of indenter to the wall of main body)
Power supply	220V, 50/60Hz
Dimension	520×225×640mm
Weight	65kg

STANDARD DELIVERY

Main unit	1 pc
Ø58mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm steel ball indenter	1 pc
Level	1 pc
Hardness test block HRA80~88	1 pc
Hardness test block HRB85~95	1 pc
Hardness test block HRC20~30	1 pc
Hardness test block HRC35~55	1 pc
Hardness test block HRC60~70	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRA80~84	HDT-B-HRA
Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block HRC35~55	HDT-B-HRC2
Hardness test block HRC60~70	HDT-B-HRC3
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK



- According to ISO 6508



Ø60mm flat anvil
(included)



Ø150mm flat anvil
(included)



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



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



desk (optional)

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. testing width	165mm (from the center of indenter to the wall of main body)
Dimension	520×160×700mm
Weight	60kg

STANDARD DELIVERY

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

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

MANUAL ROCKWELL HARDNESS TESTER (BASIC TYPE) CODE HDT-RW160



■ According to ISO 6508



Ø58mm flat anvil (included)



Ø150mm flat anvil (included)



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



level (included)



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



desk (optional)

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG
Preliminary test force	98N (10kg)
Test force	588N (60kg), 980N (100kg), 1471N (150kg)
Display	analogue
Stage elevation	manual
Load control	manual
Min. reading	0.5HR
Max. workpiece height	170mm
Max. testing width	135mm (from the center of indenter to the wall of main body)
Dimension	466×238×630mm
Weight	70kg

STANDARD DELIVERY

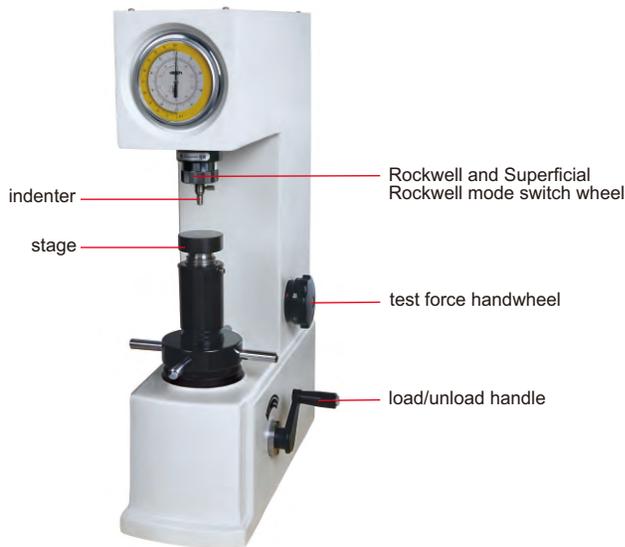
Main unit	1 pc
Ø58mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm steel ball indenter	1 pc
Ø1.5875mm steel ball	5 pcs
Level	1 pc
Hardness test block HRA80~88	1 pc
Hardness test block HRB85~95	1 pc
Hardness test block HRC20~30	1 pc
Hardness test block HRC35~55	1 pc
Hardness test block HRC60~70	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRA80~84	HDT-B-HRA
Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block HRC35~55	HDT-B-HRC2
Hardness test block HRC60~70	HDT-B-HRC3
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK



MANUAL ROCKWELL AND SUPERFICIAL ROCKWELL HARDNESS TESTER CODE HDT-RSR100



Ø60mm flat anvil (included)



Ø150mm flat anvil (included)



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



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



desk (optional)

■ According to ISO 6508

SPECIFICATION

Hardness scale	HRA, HRB, HRC, HRD, HRF, HRG, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
Preliminary test force	29.4N/3kgf for Superficial Rockwell 98N/10kgf for Rockwell
Test force	147N/15kgf, 294N/30kgf, 441N/45kgf, 588N/60kgf, 980N/100kgf, 1471N/150kgf
Display	analogue
Stage elevation	manual
Load control	manual
Min. reading	0.5HR
Max. workpiece height	160mm
Max. testing width	140mm (from the center of indenter to the wall of main body)
Dimension	460×240×660mm
Weight	75kg

STANDARD DELIVERY

Main unit	1 pc
Ø60mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Diamond indenter	1 pc
Ø1.5875mm carbide ball indenter	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Hardness test block 78~88HR15N	1 pc
Hardness test block 55~73HR30N	1 pc
Hardness test block 57~69HR30T	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block 78~88HR15N	HDT-B-HR15N2
Hardness test block 55~73HR30N	HDT-B-HR30N2
Hardness test block 57~69HR30T	HDT-B-HR30T
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK

DIGITAL BRINELL/ROCKWELL/VICKERS HARDNESS TESTER

CODE HDT-BRV130

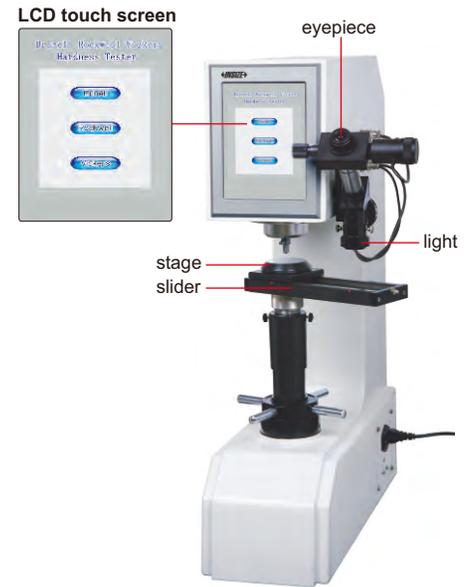
FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

- According to ISO 6506, ISO 6507, ISO 6508
- Force loading by electric motor (without weights)



SPECIFICATION

Brinell test load	49N (5kgf), 98N (10kgf), 153N (15.625kgf), 294N (30kgf), 306N (31.25kgf), 613N (62.5kgf), 980N (100kgf), 1226N (125kgf), 1839N (187.5kgf)
Brinell scales	HBW1/5, HBW2.5/62.5, HBW1/10, HBW2.5/15.625, HBW1/30, HBW2.5/31.25, HBW2.5/62.5, HBW10/100, HBW5/125, HBW2.5/187.5
Brinell resolution	0.1HBW
Rockwell test load	98N (10kgf) preload 588 (60kgf), 980 (100kgf), 1471N (150kgf) total load
Rockwell scales	HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV
Rockwell resolution	0.1HR
Vickers test load	49N (5kgf), 98N (10kgf), 196N (20kgf), 294N (30kgf), 392N (40kgf), 490N (50kgf), 588N (60kgf), 784N (80kgf), 980N (100kgf), 1176N (120kgf)
Vickers scales	HV5, HV10, HV20, HV30, HV40, HV50, HV60, HV80, HV100, HV120
Vickers resolution	0.1HV
Objective	2.5X/5X
Magnification of microscope	Brinell: 37.5X, Vickers: 75X
Hardness test range	Brinell: 8~650HBW, Rockwell: 20~100HR, Vickers: 8~2900HV
Max. workpiece height	Rockwell: 220mm, Brinell and Vickers: 150mm
Max. testing width	200mm (from the center of indenter to the wall of main body)
Data output	USB flash disk
Power supply	220V, 50/60Hz
Dimension	560×350×800mm
Weight	70kg



Ø60mm flat anvil for Rockwell (included)



Ø60mm flat anvil for Vickers and Brinell (included)



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



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



Ø150mm flat anvil for Rockwell (included)



desk (optional)

STANDARD DELIVERY

Main unit	1 pc
Vickers diamond indenter	1 pc
Rockwell diamond indenter	1 pc
Ø1.5875mm Rockwell indenter	1 pc
Ø2.5mm Brinell indenter	1 pc
Ø5mm Brinell indenter	1 pc
Ø60mm flat anvil for Rockwell	1 pc
Ø150mm flat anvil for Rockwell	1 pc
V-type anvil for Rockwell	1 pc
Ø60mm flat anvil for Vickers and Brinell	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Hardness test block 400~500HV30	1 pc
Hardness test block 180~300HBW2.5/187.5	1 pc
Level	1 pc
USB flash disk	1 pc
Touch pen	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block 400-500HV30	HDT-B-HV30D
Hardness test block 200-300HBW2.5/187.5	HDT-B-HB25A2
Small V-type anvil for Rockwell	ISH-SMALLANVIL
Desk	HDT-DESK



BRINELL/ROCKWELL/VICKERS HARDNESS TESTER CODE ISH-BRV



Ø60mm flat anvil for Rockwell (included)



Ø150mm flat anvil for Rockwell (included)



Ø60mm flat anvil for Vickers and Brinell (included)



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



V-type anvil for Vickers and Brinell (included)



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



desk (optional)



VIDEO



- According to ISO 6506, ISO 6507, ISO 6508

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
Max. workpiece height	180mm
Max. testing width	200mm (from the center of indenter to the wall of main body)
Power supply	220V, 50/60Hz
Dimension	546×300×767mm
Weight	90kg

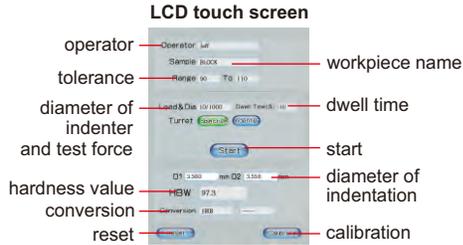
STANDARD DELIVERY

Main unit	1 pc
Ø1.5875mm carbide ball indenter	1 pc
Diamond Rockwell indenter	1 pc
Ø5mm Brinell indenter	1 pc
Ø2.5mm Brinell indenter	1 pc
Vickers indenter	1 pc
Ø60mm flat anvil for Rockwell	1 pc
Ø150mm flat anvil for Rockwell	1 pc
V-type anvil for Rockwell	1 pc
Ø60mm flat anvil for Vickers and Brinell	1 pc
V-type anvil for Vickers and Brinell	1 pc
Hardness test block HRB88~95	1 pc
Hardness test block HRC60~65	1 pc
Hardness test block HRC20~30	1 pc
Hardness test block 400~500HV30	1 pc
Hardness test block 180~300HBW2.5/187.5	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Hardness test block 400-500HV30	HDT-B-HV30D
Hardness test block 200-3000HBW2.5/187.5	HDT-B-HB25A2
Small V-type anvil for Rockwell	ISH-SMALLANVIL
Desk	HDT-DESK

AUTOMATIC DIGITAL BRINELL HARDNESS TESTERS



- Automatic testing, automatic test force loading
- LCD touch screen, easy operation
- Measure indentation by measuring microscope then read the hardness value from LCD
- Tolerance testing
- Insert USB flash disk, save the test results as Excel
- Converted to HRA, HRB, HRC, HRD, HRF, HV, HB, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Force loading by electric motor, without weights
- According to ISO 6506



ISHB-D200

**AUTOMATIC TESTING,
AUTOMATIC TEST FORCE LOADING**

**FORCE LOADING BY ELECTRIC
MOTOR (WITHOUT WEIGHT)**



step: 1

elevate the stage by hand to let the indenter approach the workpiece, press "start" to start testing automatically, the test force is loaded automatically



step: 2

measure indentation with measuring microscope



step: 3

read the hardness value from LCD



Ø80mm flat anvil (included)



Ø200mm flat anvil (included)



V-type anvil (included)



touch pen (included)



desk (optional)

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. workpiece height	200mm	
Max. testing width	155mm (from the center of indenter to the wall of main body)	
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	550x210x750mm	
Weight	110kg	

STANDARD DELIVERY

Main unit	1 pc
Ø80mm flat anvil	1 pc
Ø200mm flat anvil	1 pc
V-type anvil	1 pc
Ø2.5mm carbide ball indenter	1 pc
Ø5mm carbide ball indenter	1 pc
Ø10mm carbide ball indenter	1 pc
Hardness test block 150~250HBW2.5/187.5	1 pc
Hardness test block 75~125HBW10/1000	1 pc
Hardness test block 175~250HBW10/3000	1 pc
USB flash disk (8G)	1 pc
Touch pen	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

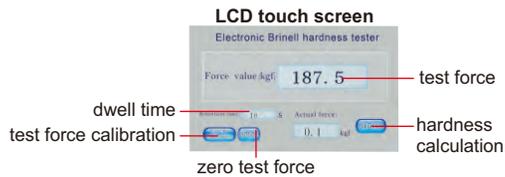
Hardness test block 200~300HBW2.5/187.5	HDT-B-HB25A2
Hardness test block 90~200HBW10/1000	HDT-B-HB10C1
Hardness test block 200~300HBW10/3000	HDT-B-HB10A2
Brinell indentation measuring system	ISHB-MSA
Desk	HDT-DESK

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

AUTOMATIC TESTING AFTER PRELIMINARY TEST FORCE IS LOADED BY HAND

AUTOMATIC BRINELL HARDNESS TESTER CODE ISHB-M100

**INSPECTION
CERTIFICATE**



step: 1

measure indentation diameter by measuring microscope

step: 2

input the diameters, the hardness value is shown on screen automatically

- 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
- According to ISO 6506



Ø80mm flat anvil (included)



Ø200mm flat anvil (included)



V-type anvil (included)



measuring microscope (included)



desk (optional)

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. workpiece height	230mm	
Max. testing width	160mm (from the center of indenter to the wall of main body)	
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	

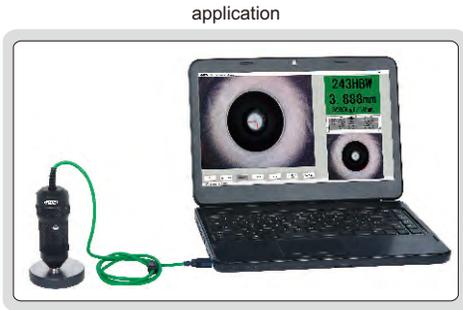
STANDARD DELIVERY

Main unit	1 pc
Ø80mm flat anvil	1 pc
Ø200mm flat anvil	1 pc
V-type anvil	1 pc
Ø2.5mm carbide ball indenter	1 pc
Ø5mm carbide ball indenter	1 pc
Ø10mm carbide ball indenter	1 pc
Hardness test block 150~250HBW2.5/187.5	1 pc
Hardness test block 75~125HBW10/1000	1 pc
Hardness test block 175~250HBW10/3000	1 pc
Measuring microscope	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

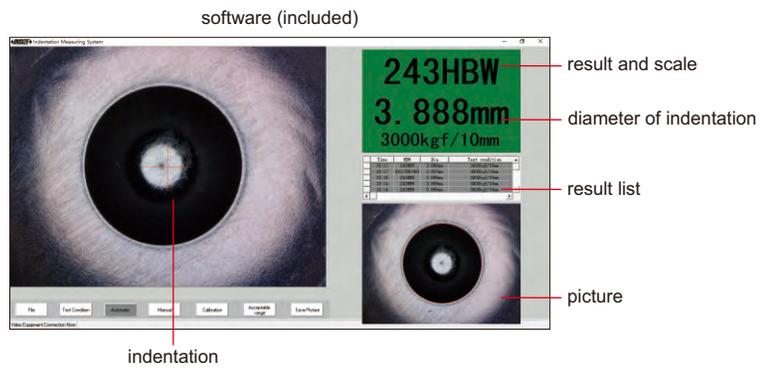
Hardness test block 200~300HBW2.5/187.5	HDT-B-HB25A2
Hardness test block 90~200HBW10/1000	HDT-B-HB10C1
Hardness test block 200~300HBW10/3000	HDT-B-HB10A2
Brinell indentation measuring system	ISHB-MSA
Desk	HDT-DESK

BRINELL INDENTATION MEASURING SYSTEM CODE ISHB-MSA



software CD
(included)

- Connected to computer USB port
- Automatically measure the indentation
- Result saved to Excel automatically
- Tolerance testing
- Calibration with standard hardness blocks or standard indentation blocks



SPECIFICATION

Applicable Brinell indenter	Ø10mm, Ø7.26mm, Ø5mm, Ø4mm, Ø2.5mm	
Hardness range	16~650HB	
Range of indentation diameter	Ø0.6~6mm	
Test force	62.5, 100, 125, 187.5, 250, 500, 750, 1000, 1500, 3000kgf	
Hardness resolution	1HB	
Diameter measuring resolution	0.001mm	
Diameter measuring accuracy	Ø10mm ball indenter	±0.4% (indentation diameter)
	Ø5mm ball indenter	±0.8% (indentation diameter)
	Ø2.5mm ball indenter	±1.2% (indentation diameter)
Camera	sensor	1/3.2" CMOS
	pixel	2M (resolution 1600×1200)
	view filed	8×6mm
Dimension	170×54×54mm	
Weight	385g	



standard blocks for Ø5mm and Ø10mm indenters (included)

STANDARD DELIVERY

Main unit	1 pc
Software	1 pc
Ø5mm standard indentation block	1 pc
Ø10mm standard indentation block	1 pc

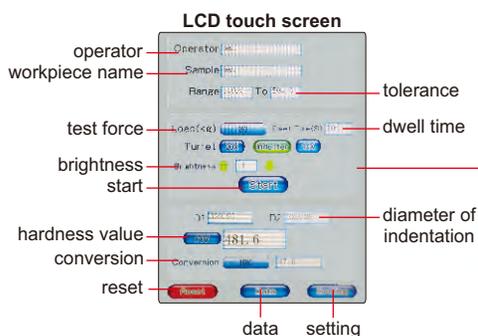
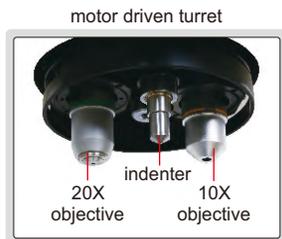
OPTIONAL ACCESSORY

Ø2.5mm standard indentation block	ISHB-MSA-BLOCK25
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FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

INSPECTION CERTIFICATE

DIGITAL VICKERS HARDNESS TESTER CODE HDT-VD50A



Ø58mm flat anvil (included)



Ø150mm flat anvil (included)



V-type anvil (included)



level (included)

- LCD touch screen, easy operation
- Insert USB flash disk, save the test results as Excel
- Converted to HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Force loading by electric motor, without weights
- According to ISO 6507

SPECIFICATION

Test force	0.5, 1, 2, 2.5, 3, 5, 10, 15, 20, 30, 40, 50kgf
Range	8~2900HV
Load control	automatic (load/dwell/unload)
Load dwell time	1~99 second
Eyepiece	10X
Objective	10X, 20X
Total magnification	100X, 200X
Length measurement resolution	0.01µm
Data output	USB flash disk
Max. workpiece height	180mm
Max. testing width	160mm (from the center of indenter to the wall of main body)
Power supply	220V, 50/60Hz
Dimension	580x190x700mm
Weight	55kg

STANDARD DELIVERY

Main unit	1 pc
10X, 20X objective	1 pc of each
Vickers indenter	1 pc
Ø58mm flat anvil	1 pc
Ø150mm flat anvil	1 pc
V-type anvil	1 pc
Hardness test block 400~500HV10	1 pc
Hardness test block 400~500HV30	1 pc
USB flash disk	1 pc
Level	1 pc
Touch pen	1 pc
Anti-dust cover	1 pc

OPTIONAL ACCESSORY

Hardness test block 400~500HV10	HDT-B-HV10D
Hardness test block 400~500HV30	HDT-B-HV30D
Measuring system	HDT-VS530

VICKERS HARDNESS MEASURING SYSTEM CODE HDT-VS530

application example



C-mount



software CD
(included)



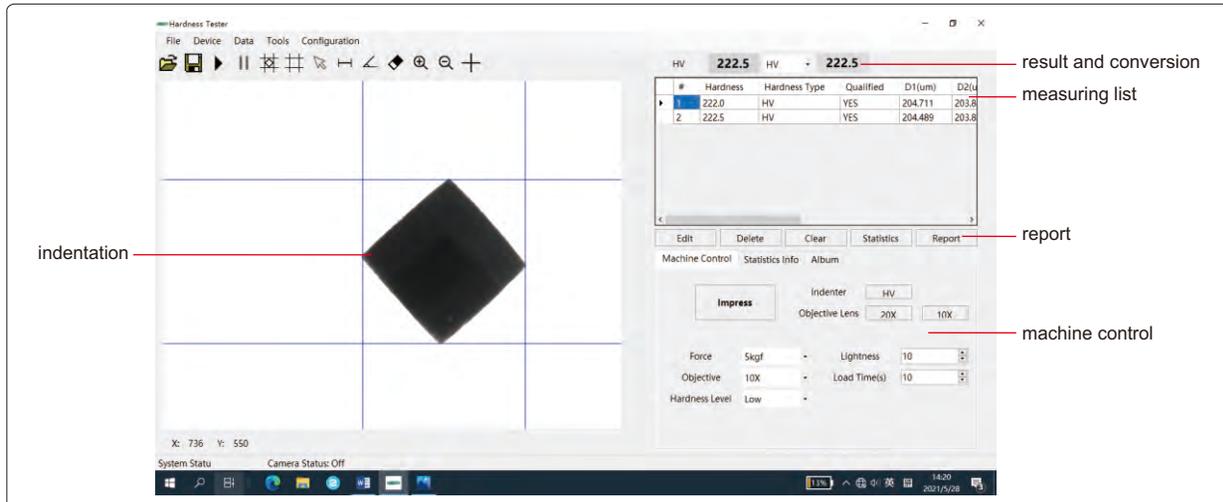
VIDEO



camera adapter (included)

- Suitable for digital Vickers hardness tester **HDT-VD50A**
- Connected to computer USB port
- Measure the indentation sizes automatically or manually
- Multiple measurements to have average value, max. value, min. value and variance
- Convert to HRA, HRB, HRC, HRD, HRF, HV, HK, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Hardness tester can be controlled by software
- Measurement result can be sent to Word, Excel or CSV

measuring software (included)



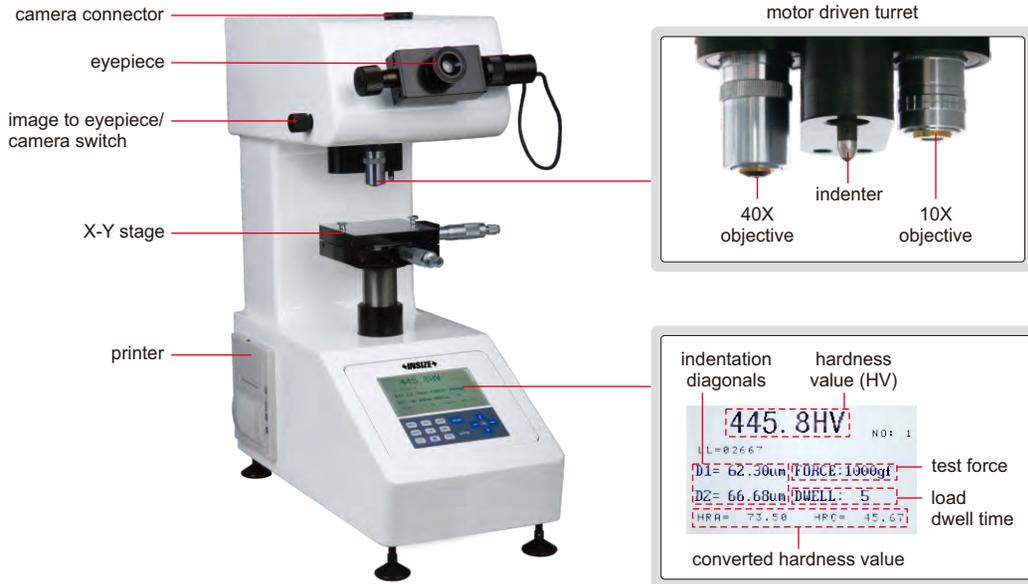
SPECIFICATION

Sensor	1/2.5" CMOS
Pixel	5M (resolution 2592×1944)
Hardness measurement resolution	0.1HV
Length measurement resolution	0.001µm
Test force	1, 2, 2.5, 3, 5, 10, 15, 20, 30, 40, 50kgf
Dimension	30×30×40mm
Weight	50g

STANDARD DELIVERY

Main unit	1 pc
Software and USB cable	1 pc
RS232 cable	1 pc
Camera adapter	1 set

DIGITAL MICRO-VICKERS HARDNESS TESTER CODE ISH-TDV1000A



- Measure hardness of thin or small workpieces
- Based on Vickers (HV), can be converted to Rockwell (HRA, HRB and HRC)
- According to ISO 6507



cylinder holder (included)



vice (included)



slice holder (included)

SPECIFICATION

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
Stage elevation	manual
Load control	automatic (load/dwell/unload)
Load dwell time	5~60 second (5 second increment)
Objective	10X, 40X
Eyepiece	15X
Total magnification	150X (for observation) 600X (for measurement)
Max. workpiece height	85mm
Max. testing width	85mm (from the center of indenter to the wall of main body)
X-Y stage	dimensions: 100×100mm
	travel range: 25×25mm graduation: 0.01mm
Data output	RS232C
Power supply	110/220V, 50Hz
Dimension	540x500x640mm
Weight	50kg

STANDARD DELIVERY

Main unit	1 pc
10X, 40X objective	1 pc of each
Micro Vickers indenter	1 pc
Hardness test block 400~500HV0.2	1 pc
Hardness test block 700~800HV1	1 pc
Slice holder	1 pc
Vice	1 pc
Cylinder holder	1 pc
Level	1 pc
Anti-dust cover	1 pc

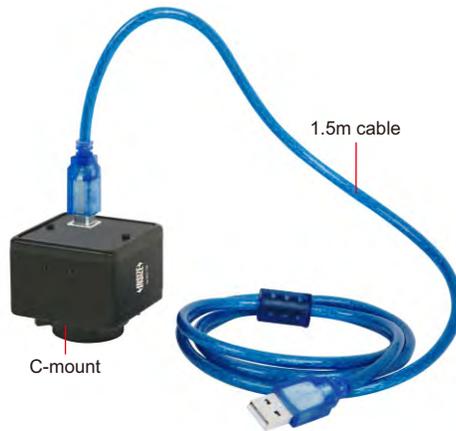
OPTIONAL ACCESSORY

20X objective	ISH-TDV-20X
Hardness test block 400~500HV0.2	HDT-B-HV02C
Hardness test block 700~750HV1	HDT-B-HV1F
Measuring system	9631-130
Camera adapter	ISH-TDV-ADAPTER

VICKERS HARDNESS MEASURING SYSTEM CODE 9631-130



software CD
(included)

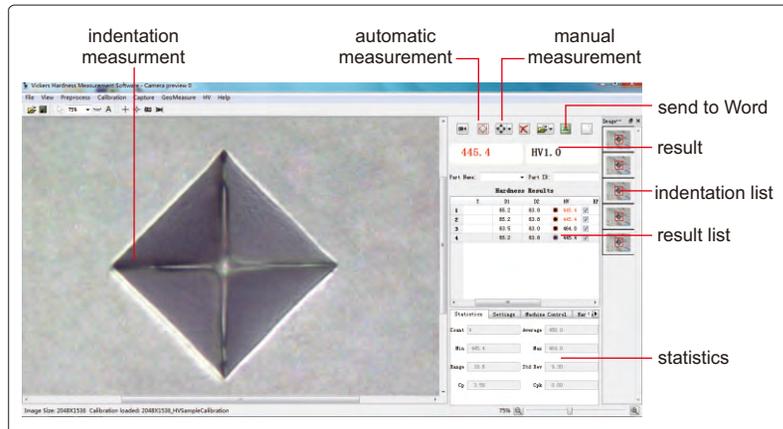


application example



- Connected to computer USB port
- Measure the indentation sizes automatically or manually
- Multiple measurements to have average value, max. value and min. value
- Tolerance testing
- 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 sent to Word or Excel

software (included)



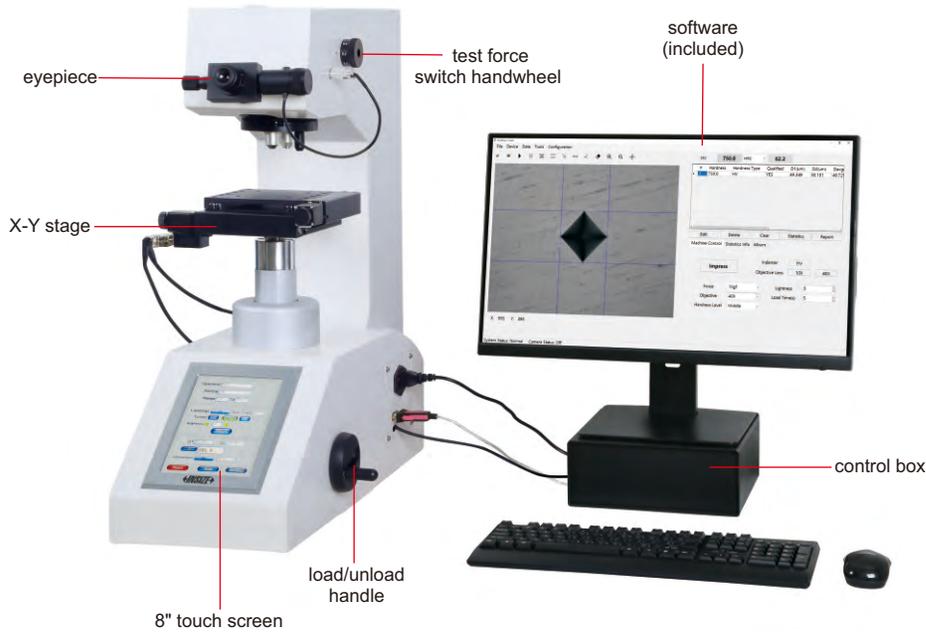
SPECIFICATION

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	57×51×49mm
Weight	200g

STANDARD DELIVERY

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

AUTOMATIC MICRO-VICKERS HARDNESS TESTER CODE HDT-VS1D



vice (included)



slice holder (included)



cylinder holder (included)

- Detect depth of hardened layer of head treatment and coating thickness. Can also be used for metallography observation
- Calibrate according to standard hardness blocks or length scales
- Convert to HRA, HRB, HRC, HRD, HRF, HV, HBW, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T
- Built-in printer
- According to ISO 6507



X-Y stage



motor driven turret

result and conversion

measuring list

#	Hardness	Hardness Type	Qualified	D1(um)	D2(um)	Davg
1	750.0	HV	YES	49.349	50.101	49.72

report

machine control

depth of hardened layer

To be continued

Continued from previous page

SPECIFICATION

Test force	0.098N (10gf), 0.245N (25gf), 0.49N (50gf), 0.98N (100gf), 1.96N (200gf), 2.94N (300gf), 4.9N (500gf), 9.8N (1kgf)	
Vickers scales	HV0.01, HV0.025, HV0.05, HV0.1, HV0.2, HV0.3, HV0.5, HV1	
Range	8HV~2900HV	
Length measurement resolution	0.01µm	
Objective/indenter switch	motor driven turret	
Stage lifting	manual	
Load control	automatic (load/dwell/unload)	
Load dwell time	1~99 second	
Objective	10X, 40X	
Eyepiece	10X	
Total magnification	100X (for measurement or observation), 400X (for measurement)	
Data output	built-in printer	
Max. workpiece height	160mm	
Max. testing width	160mm (from the center of indenter to the wall of main body)	
X-Y stage	dimensions: 150×150mm, travel range: 50×50mm, graduation: 1µm, displacement repeatability: 3µm	
Pixel	5M	
Measurement and control software	Stage movement control	select points for indenter to press then read 1. select any point 2. rotate and select a point 3. select points along X-axis 4. select points along Y-axis 5. select points along Z 6. select points at any internal 7. program selection of points
	Measurement	automatic mode: automatic turret, automatic loading, automatic measurement control can also select manual mode
Power supply	220V, 50/60Hz	
Dimension	620×250×710mm	
Weight	50kg	

STANDARD DELIVERY

Main unit	1 pc
10X, 40X objective	1 pc of each
Micro vickers indenter	1 pc
Hardness test block 400~500HV0.2	1 pc
Hardness test block 700~750HV1	1 pc
Level	1 pc
Touch pen	1 pc
Anti-dust cover	1 pc
Control box	1 pc
Software and USB dongle	1 pc of each
Computer	1 pc
Slice holder	1 pc
Vice	1 pc
Cylinder holder	1 pc

OPTIONAL ACCESSORY

Hardness test block 400~500HV0.2	HDT-B-HV02C
Hardness test block 700~750HV1	HDT-B-HV1F
OFFICE software	7313-OFFICE
Knoop indenter	HDT-VS1D-KNOOP