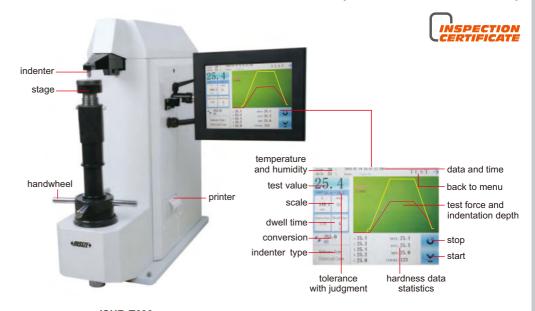
FORCE LOADING BY CLOSE-LOOP SYSTEM (WITHOUT WEIGHTS)

AUTOMATIC TESTING, CONTINUOUS TESTING



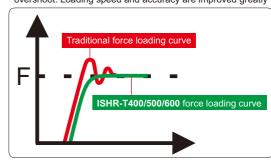


AUTOMATIC DIGITAL ROCKWELL/SUPERFICIAL ROCKWELL HARDNESS TESTERS (DOLPHIN-NOSE TYPE)



- ISHR-T600
- Automatic testing, the preliminary and total test force are loaded by high speed close-loop system automatically
- Dolphin-nose indenter for easy reach of the internal wall of pipes and grooves, the minimum internal diameter is 40mm
- Can transmit test data to computer
- LCD touch screen
- Tolerance with judgement
- Memory of 120 test values for browsing and output
- Provide the maximum, minimum and average values of measurement
- The test process curve shows the material property
- Test force is selected automatically according to hardness scale
- According to ISO 6508

The preliminary and total test force are loaded by high speed close-loop system automatically, faster and more stable than traditional motor loading. Loading process is smooth, no overshoot. Loading speed and accuracy are improved greatly



SPECIFICATION

Code		ISHR-T400	ISHR-T500	ISHR-T600	
Туре		Rockwell	Superficial Rockwell	Rockwell and Superficial Rockwell	
Handaasa	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	
Hardness scale	with optional indenters	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		Rockwell: 98N (10kg)	Superficial Rockwell: 29.4N (3kg)	Rockwell: 98N (10kg) Superficial Rockwell: 29.4N (3kg)	
Total 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)	
Conversion scale		HR, HB, HK, HV			
Stage elevation		manual			
Load control		high speed close-loop system automatic loading (load/dwell/unload)			
Load dwell	time	0~99 second			
Resolution		0.1HR			
Data output		built-in printer, RS232			
Max. workpiece height		260mm			
Max. testing width		150mm (from the center of indenter to the wall of main body)			
Power supply		110/220V, 50/60Hz			
Dimension		700×260×700mm			
Weight		85kg			

To be continued



Continued from previous page

STANDARD DELIVERY

Code	ISHR-T400	ISHR-T500	ISHR-T600
Main unit	1 pc	1 pc	1 pc
Ø60mm 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
Ø1.5875mm carbide ball indenter	1 pc	1 pc	1 pc
Diamond indenter	1 pc	1 pc	1 pc
Hardness test block HRB88~95	1 pc	_	1 pc
Hardness test block HRC20~30	1 pc	_	1 pc
Hardness test block HRC40~50	1 pc	_	1 pc
Hardness test block HRC60~65	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





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

OPTIONAL ACCESSORY

OF HORAL ACCESSORY		
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	
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	
Connection cable and software	ISHR-T-SOFTWARE	

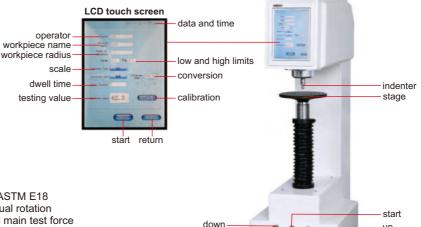
AUTOMATIC DIGITAL ROCKWELL/SUPERFICIAL ROCKWELL HARDNESS TESTERS (FOR MASS PRODUCTION)



AUTOMATIC LIFTING OF STAGE AUTOMATIC LOADING AND UNLOADING

DATA

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)



- According to BSEN 6508, ISO 6508, ASTM E18 23
 - 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

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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



 $\mathsf{desk} \ (\textbf{optional})$

SPECIFICATION

Code		HDT-A410**	HDT-A510**	HDT-A610**	
Туре		Rockwell	Superficial Rockwell	Rockwell and Superficial Rockwell	
Handasas	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	
Hardness scale	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	
Preliminar	y 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 liftin	g	automatic			
Load contr	ol	automatic (load/dwell/unload)			
Load dwell	l time	0~99 second			
Resolution	1	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

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

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			



AUTOMATIC DIGITAL ROCKWELL/SUPERFICIAL ROCKWELL HARDNESS TESTERS



FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

DATA OUTPUT







- 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





Ø63mm flat anvil (included)



Ø150mm flat anvil (included)



level (included)



desk (optional



touch pen (included)



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



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

To be continued



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SPECIFICATION

Code		ISH-RSR400**	ISH-RSR500 **	ISH-RSR600 **	
Туре		Rockwell	Superficial Rockwell	Rockwell and Superficial Rockwell	
Uavduaaa	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	
Hardness scale	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

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

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		

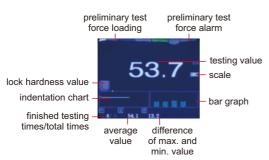


AUTOMATIC DIGITAL ROCKWELL HARDNESS TESTER CODE ISH-MRD200**











- 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	60ka	

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

STANDARD DELIVERY

SIANDAND 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	

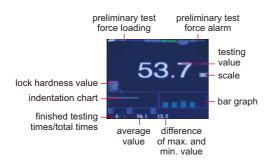
Wireless printer	ISH-DS-PRINTER
Ø3.175mm carbide ball indenter	ISH-EHK-INDENTER
Hardness test block HRB88~100	HDT-B-HRB
Hardness test block HRC60~70	HDT-B-HRC3
Hardness test block HRC20~30	HDT-B-HRC1
Small V-type anvil	ISH-SMALLANVIL
Desk	HDT-DESK







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	

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

STANDARD DELIVERY

STANDARD DELIVERT	
1 pc	



AUTOMATIC ROCKWELL HARDNESS TESTER CODE ISH-MR150**







■ 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	

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

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

STANDARD DELIVERY

STANDAND DELIVERT	
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





AUTOMATIC 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

OI LOII IOATION		
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	

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

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

STANDARD DELIVERY

STANDARD DELIVERT	
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

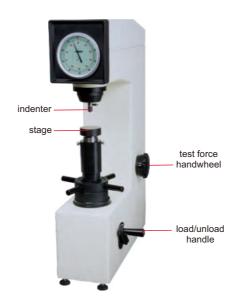


MANUAL ROCKWELL HARDNESS TESTER CODE ISH-R150





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

OI LOII IOATION		
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	

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	

STANDARD DELIVERY

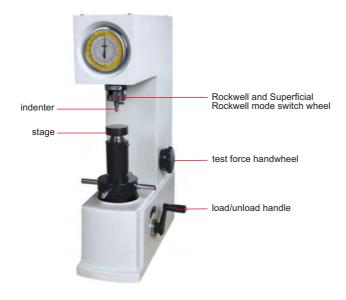
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Main unit	1 pc	
Ø58mm flat anvil	1 pc	
Ø150mm flat anvil	1 pc	
V-type anvil	1 pc	
Diamond indenter	1 pc	
Ø1.5875mm steel ball indenter	1 pc	
Ø1.5875mm steel ball	5 pcs	
Level	1 pc	
Hardness test block HRA80~88	1 pc	
Hardness test block HRB85~95	1 pc	
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	



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

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

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

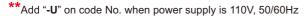
DIGITAL BRINELL/ROCKWELL/VICKERS HARDNESS TESTER CODE HDT-BRV130**

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

INSPECTION CERTIFICATE

SPECIFICATION

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	



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





Ø60mm flat anvil for Rockwell (included)



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



Ø150mm flat anvil for Rockwell (included)



Ø60mm flat anvil for Vickers and Brinell (included)



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



desk (optional)

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)





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	

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

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

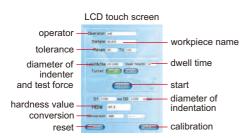
OPTIONAL ACCESSORY		
Hardness test block HRB88~100	HDT-B-HRB	
Hardness test block HRC60~70	HDT-B-HRC3	
Hardness test block HRC20~30	HDT-B-HRC1	
Hardness test block 400-500HV30	HDT-B-HV30D	
Hardness test block 200-3000HBW2.5/187.5	HDT-B-HB25A2	
Small V-type anvil for Rockwell	ISH-SMALLANVIL	
Desk	HDT-DESK	



AUTOMATIC DIGITAL BRINELL HARDNESS TESTERS

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHT)

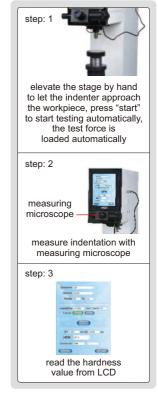




- Automatic testing, automatic test force loading
- LCD touch screen, easy operation
- Measure indentation by measuring microscope then read the hardness value from LCD
- Tolerance testing Insert USB flash disk, save the test results as Excel
- Converted to HRA, HRB, HRC, HRD, HRF, HV, HB, HR15N, HR30N,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



ISHB-D200





(included)





Ø200mm flat anvil V-type anvil (included) (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 oindenter to the wal	
Stage elevation		manual	
Load control		automatic (load/dwell/unload)	
Load dwell time		5~60 second	
Measuring	magnification	20X	
microscope	resolution	0.625mm	
Power supply		220V, 50/60Hz**	
Dimension		550x210x750mm	
Weight		110kg	

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

STANDARD DELIVERY

STANDARD DELIVERT	
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

OF HONAL ACCESSORT	
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

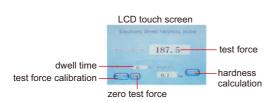
AUTOMATIC BRINELL HARDNESS TESTER CODE ISHB-M100**

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)

AUTOMATIC TESTING AFTER PRELIMINARY TEST FORCE IS LOADED BY HAND











- 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

OI EOII IOATION		
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 ti	me	5~60 second
Measuring	magnification	20X
microscope 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

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

OI HONALAGGEGGGKI	
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





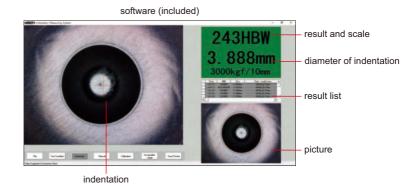






software CD (included)

- 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

SI ESII ISAIISI		
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 indneter	±0.4% (indentation diameter)
	Ø5mm ball indneter	±0.8% (indentation diameter)
	Ø2.5mm ball indneter	±1.2% (indentation diameter)
	sensor	1/3.2" CMOS
Camera	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



DIGITAL VICKERS HARDNESS TESTER CODE HDT-VD50A**

FORCE LOADING BY ELECTRIC MOTOR (WITHOUT WEIGHTS)









Ø58mm flat anvil (included)



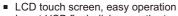
Ø150mm flat anvil (included)



V-type anvil (included)



level (included)



- 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	

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

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









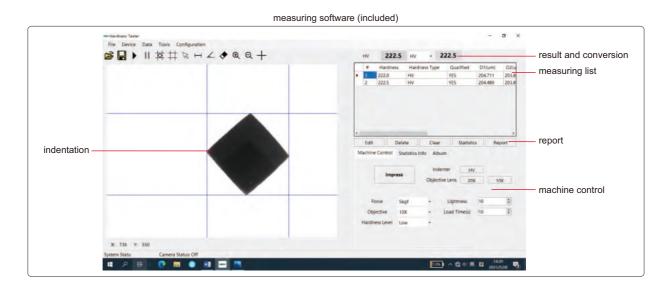


(included)



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



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







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. workpiece height Max. testing width	85mm (from the center of indenter to the wall of main body)
	85mm (from the center of
	85mm (from the center of indenter to the wall of main body)
Max. testing width	85mm (from the center of indenter to the wall of main body) dimensions: 100×100mm
Max. testing width	85mm (from the center of indenter to the wall of main body) dimensions: 100×100mm travel range: 25×25mm
Max. testing width X-Y stage	85mm (from the center of indenter to the wall of main body) dimensions: 100×100mm travel range: 25×25mm graduation: 0.01mm
Max. testing width X-Y stage Data output	85mm (from the center of indenter to the wall of main body) dimensions: 100×100mm travel range: 25×25mm graduation: 0.01mm RS232C

^{**}Add "-B" on code No. when power supply is 110/220V, 60Hz

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





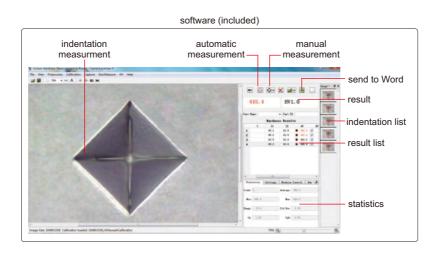


(included)





- 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



SPECIFICATION

or Edit Idanian		
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