



# HTR 45D

## Digital Superficial Rockwell Hardness Tester

- > Digital Superficial Rockwell Hardness Tester with high resolution large screen. Control system allows the display and set the present scale, test force, test indenter, dwell time and hardness conversion;
- > Main functions: Superficial Rockwell scales selection; conversion scales; data save and print out, automatic calculation of maximum, minimum and average value.

### Application

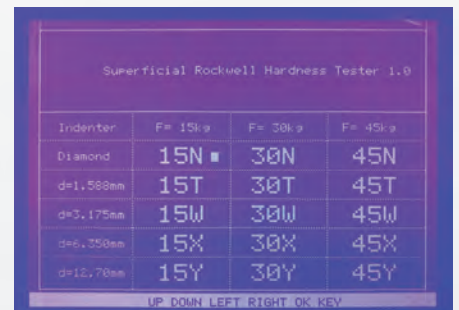
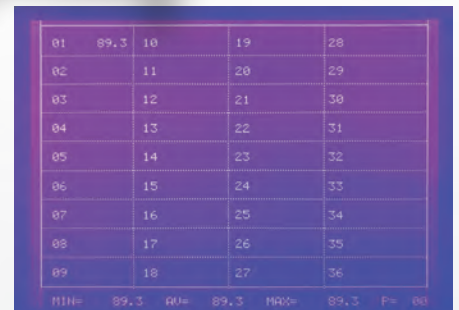
- > Surface quenched steel, surface heat treating and chemical treating materials, copper alloy, aluminum alloy, sheet, zinc, chrome and tin layers, bearing steel and cold and hard casting etc.

### Reference standard

- > ISO 6508, ASTM E 18, JIS Z2245



Superficial Rockwell				
Hardness scale	Standard block hardness range	Displayed value allowed tolerance	Displayed value allowed repeatability	
HR15N	70~77 HR15N	±2 HR15N	≤0.04 (100-H) or 1.2 Rockwell unit*	
	78~88 HR15N			
	89~91 HR15N			
HR30N	42~54 HR30N	±2 HR30N		
	55~73 HR30N			
	74~80 HR30N			
HR45N	20~31 HR45N	±2 HR45N		
	32~61 HR45N			
	63~70 HR45N			
HR15T	73~80 HR15T	±3 HR15T		≤0.06 (100-H) or 2.4 Rockwell unit*
	81~87 HR15T			
	88~93 HR15T			
HR30T	43~56 HR30T	±3 HR30T		
	57~69 HR30T			
	70~82 HR30T			
HR45T	12~33 HR45T	±3 HR45T		
	34~54 HR45T			
	55~72 HR45T			
HR15W	83~100 HR15W	±1 HR15W	2 HR15W	
HR30W	60~99 HR30W	±1 HR30W	2 HR30W	
HR45W	38~99 HR45W	±1 HR45W	2 HR45W	
HR15X	89~100 HR15X	±1 HR15X	2 HR15X	
HR30X	75~100 HR30X	±1 HR30X	2 HR30X	
HR45X	63~99 HR45X	±1 HR45X	2 HR45X	
HR15Y	80~100 HR15Y	±1 HR15Y	2 HR15Y	
HR30Y	77~100 HR30Y	±1 HR30Y	2 HR30Y	
HR45Y	64~100 HR45Y	±1 HR45Y	2 HR45Y	



(H: average hardness value, \*: select a larger value)

Model	HTR 45D
Technology	Weights - Load electronic controlled
Load selection	Right side handle
Pre-load	3kg
Main loads	15kg, 30kg, 45kg
Dwell time	0~60s
Loading time	2s
Test force tolerance	±1.0%
Test cycle type	Semi-automatic type: Manual - pre-load with sound alarm brake, Automatic - load, dwell, unload, show the hardness value
Hardness scales	HR15N, HR30N, HR45N, HR15T, HR30T, HR45T, HR15W, HR30W, HR45W, HR15X, HR30X, HR45X, HR15Y, HR30Y, HR45Y
Hardness test ranges	Superficial Rockwell: HR15N 70 - 91, HR30N 42 - 80, HR45N 20 - 70, HR15T 73 - 93, HR30T 43 - 82, HR45T 12 - 72, HR15W 83 - 100, HR30W 60 - 99, HR45W 38 - 99, HR15X 89 - 100, HR30X 75 - 100, HR45X 63 - 99, HR15Y 80 - 100, HR30Y 77 - 100, HR45Y 64 - 100
Hardness resolution	0.1HR
Scale conversion	Automatic conversion: HV, HK, HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRK, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T, HS, HBW - According to ASTM E140
Indenters	Diamond Rockwell indenter, ø 1.588mm ball indenter
Nose bore diameter	6.35mm
Vertical test capacity	175mm
Horizontal test capacity	165mm
Anvils dimensions	Large plane test table ø 150mm Middle plane test table ø 60mm V-shaped test table ø 40mm
Max. sample weight	100kg
Z axis movement	Manual
Z axis speed	Manual
Display type	LCD
Display dimensions	4.3"
Input mode	Control panel keyboard
Displayed data	Scale, test force, dwell time, indenter, conversion scale, test number, date and time
Statistics or functions	Max, min, average value
Data storage	Internal storage, 216 tests
Data output	Hypertextual session format (.HT)
Energy saving mode	Yes
Printer	Built-in printer
Interfaces	RS232
Safety devices	Emergency switch
Operation temperature	10~30°C
Operation rel. humidity	≤65%
Weight	73kg
Dimensions	520x215x700mm
Power supply	230V, 50Hz
Voltage variance	±10%
Absorbed power	500W

Standard accessories

Model	Description	Q.ty
RI-120	Diamond Rockwell indenter	1 pc
BI-15	ø 1.588mm ball indenter	1 pc
RTLTT150	Large plane test table ø 150mm	1 pc
RTMTT60	Middle plane test table ø 60mm	1 pc
RTVTT40	V-shaped test table ø 40mm	1 pc
RHB-R15N8090	Hardness block 80~90 HR15N	1 pc
RHB-R30T7085	Hardness block 70~85 HR30T	1 pc
RHB-R30N6580	Hardness block 65~80 HR30N	1 pc
RT-3WS	Weight A,B,C	3 pc
RT-4RS	Horizontal regulating screw	4 pc
RT-LV	Spirit level	1 pc
RT-SK	Service keys	1 set
RT-PC	Power cable	1 pc
RT-ADC	Anti-dust cover	1pc

Optional accessories

Model	Description
RT-BI3.1	ø 3.175mm ball indenter
RT-BI6.3	ø 6.35mm ball indenter
RT-BI12.7	ø 12.7mm ball indenter
RT-WB	Work bench
RT-APP	Additional printer paper roll

Superficial Rockwell hardness blocks

Model	Range
HB-R15N70-77	70-77 HR15N
HB-R15N78-88	78-88 HR15N
HB-R15N89-91	89-91 HR15N
HB-R30N42-54	42-54 HR30N
HB-R30N55-73	55-73 HR30N
HB-R30N74-80	74-80 HR30N
HB-R45N20-31	20-31 HR45N
HB-R45N32-61	32-61 HR45N
HB-R45N63-70	63-70 HR45N
HB-R15T77-80	77-80HR15T
HB-R15T80-83	80-83HR15T
HB-R15T88-93	88-93HR15T
HB-R30T49-56	49-56 HR30T
HB-R30T57-63	57-63 HR30T
HB-R30T73-82	73-82 HR30T
HB-R45T34-43	34-43 HR45T
HB-R45T58-72	58-72 HR45T





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