

# MIDLAND METROLOGY LIMITED

## uRock-150/45

### Digital Twin Rockwell Hardness Tester



# Product Feature & Application

## Product Features

- Closed loop control system, high precision load cell in stead of dead weights.
- Digital Rockwell & superficial Rockwell hardness tester adopts 8" touch screen for user to directly select the hardness scale and test force and displays hardness value, conversion scale, test force, dwell time, etc. Control panel adopts menu structure ensuring good reliability.
- Rockwell hardness scales: 15 kinds of Rockwell scales & 15 kinds of superficial Rockwell scales. High resolution 0.1HR.
- High, medium, low hardness values can be automatically corrected.
- Automatic correction of test force, with the force accuracy increased by dynamometer.
- Automatically applies the initial test force and the main test force.
- Automatic testing process: Automatic loading - Dwell - Unloading, and automatic display hardness value.
- Curve display: test force, displacement depth change curve, real-time test force value curve. Curve display: force, displacement depth change curve, real-time force value curve.
- Powerful data processing function, including: HR, HB, HV and other hardness scale conversions.
- Qualified range can be set, automatic alarm sound when over the limit. Tester's name, sample name and other information can be input.
- Password can be set to protect the settings. More specimen and test information.
- With USB interface, test data can be saved in U-flash directly in Excel format. easy to edit and process.
- Indenter protective device for optional purchase (testing sample size should over 15mm)



## Product Application

Industrial production and inspection of product quality on processing technology. Ferrous and nonferrous metals, hardened steel, tempered steel, annealed steel, sheet of various thicknesses, carbide materials, powder metallurgy materials, hardness and thermal spray coating.

# Operation Interface

8" touch screen for user to directly select the hardness scale and test force. Displays hardness value, conversion scale, test force, dwell time, etc. Control panel adopts menu structure. Good reliability.

Tester

Product Name

Radius of Curvature

Range  To

Hardness Type

Conversion Type  Conversion Value

Dwell Time(S)

Hardness Value

Measurement Scale

Please choose the right indenter for the scale you choosed.  
Explanation

Scale/Force/Indentor    Scale/Force/Indentor

Calibration

Scale:

Standard Hardness Value : Measured:

Low

Medium

High

Force Calibration

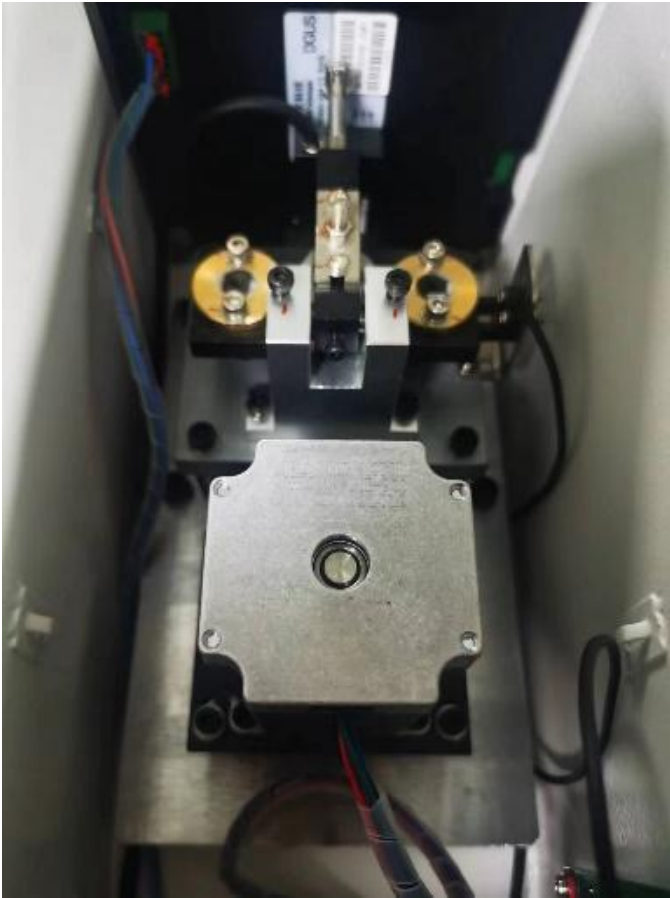
Standard:  kg

Measured:  kg



# User Friendly

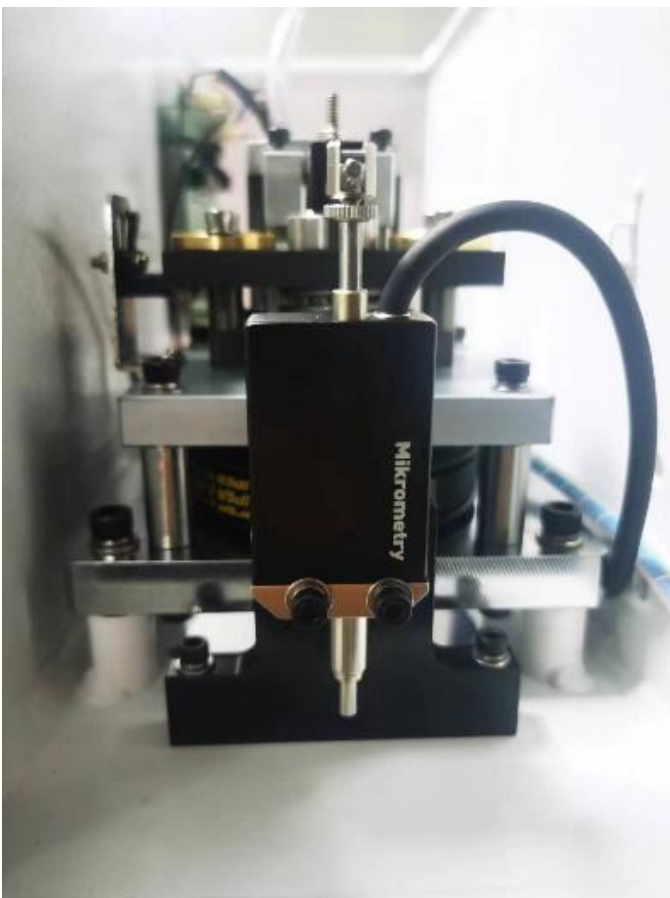
uRock-150/45 is with Closed loop control system with high precision load cell structure. Automatically applies the initial test force and the main test force. Automatic testing process: loading - Dwell - Unloading.



Electronic Motorized Loading



Load Cell



Displacement Sensor



Displacement Sensor

# Data Output & Indentor Protective

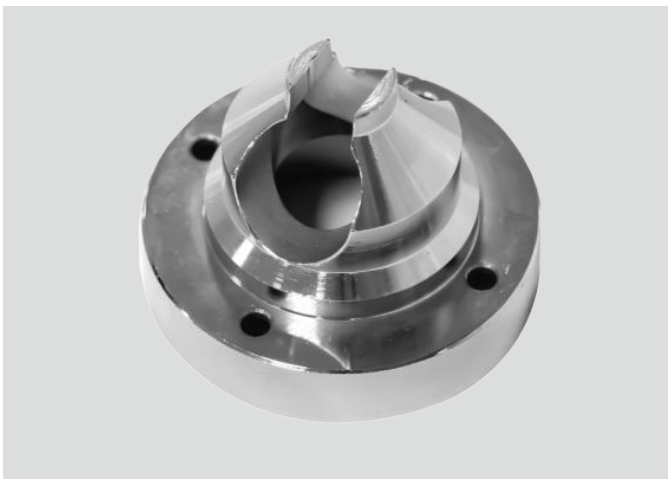
With USB interface, test data can be saved in U-flash directly in Excel format. easy to edit and process. Indenter protective device for optional purchas.



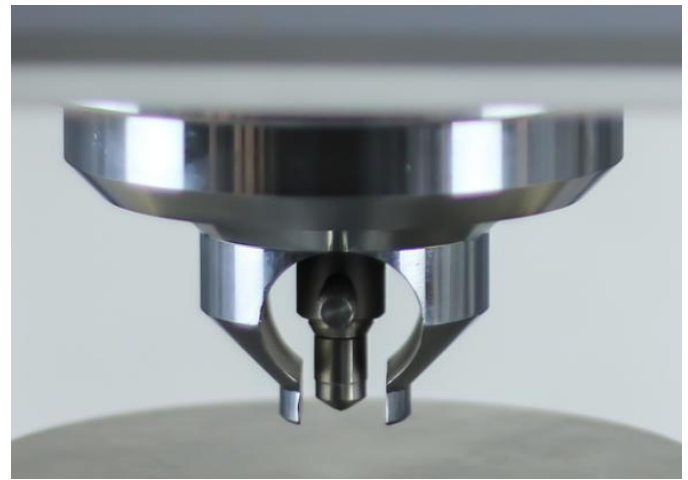
USB Interface



USB Interface

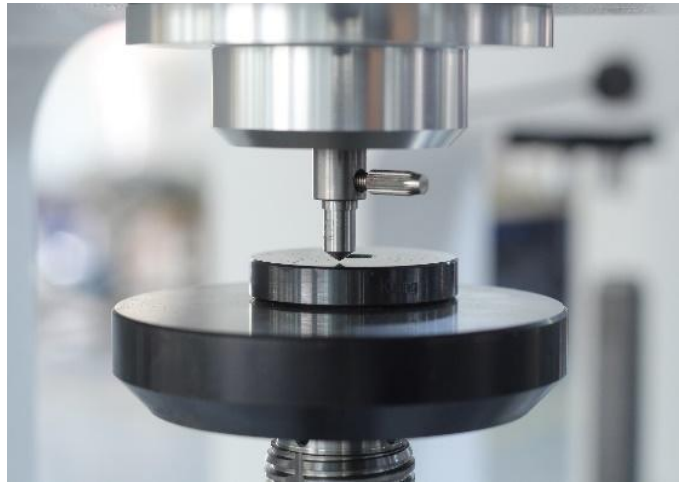


Indenter Protective Device



Indenter Protective Device

# More Detailed Photos



Web:[www.midland-metrology.co.uk](http://www.midland-metrology.co.uk)

Email:[sales@midland-metrology.co.uk](mailto:sales@midland-metrology.co.uk)

# Technical Specification

<b>Model</b>	<b>uRock-150/45</b>
Product Name	Digital Twin Rockwell Hardness Tester
Rockwell Initial Test force	10Kgf(98.07N)
Superficial Rockwell Initial Test Force	3.0kgf(29.4N)
Rockwell Total Test force	60kgf(588N) 100kgf(980N) 150kgf(1471N)
Superficial Rockwell Total Test Force	15kgf(147.1N) 30kgf(249.2N) 45kgf(441.3N)
Rockwell Hardness Scale	HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRH, HRK, HRL, HRM, HRR,HRP, HRS, HRV
Superficial Rockwell Hardness Scale	15N, 15TW, 15W, 15X, 15Y, 30N, 30TW, 30W, 30X, 30Y, 45N, 45TW, 45W, 45X, 45Y
Hardness Conversion Scale	HV, HK, HRA, HRB, HRC, HRD, HRE, HRF, HRG, HRK, HR15N, HR30N, HR45N, HR15T, HR30T, HR45T, HS, HBW HRA:20-88, HRB:20-100, HRC:20-70, HRD:40-77, HRE:70-100, HRF:60-100, HRG:30-94, HRH:80-100, HRK:40-100, HRL:100-120, HRM:85-115, HRR:114-125 HR15N:70-94 HR30N:42-86 HR45N:20-77 HR15TW:67-93 HR30TW:29-82 HR45TW:10-72
Hardness Testing Range	
Indenter	Diamond Rockwell Indenter, $\phi$ 1.588mmBall Indenter
Loading Method	Automatic (Loading/Dwell/Unloading)
Executive Standards	BSEN 6508, ISO 6508, ASTM E18, GB/T230
Dwell time	0-99s
Hardness resolution	0.1 HR
Error of Test Force	< 1%
Hardness reading	Touch screen LCD display
Data Output	USB flash disk
Data Save	The measured values are saved on USB flash drive in Excel format
Conversion Scale	Rockwell, Brinell and Vickers
Test Height	220mm
Test Throat	200mm
Machine Dimension	560 * 220 * 800 mm
Net Weight	75kg
Power Supply	AC220 + 5%, 50 ~ 60 hz



# Packing List

Item	Quantity	Item	Quantity
Diamond Rockwell Indentor	1	1.5875mm Ball Indentor	1
Hardness Block (HRC high and low, HRB, HR15N, HR30N, HR30T)	6	Large, Medium Test Anvil	Each 1
Spare Fuse (2A)	2	V-shaped Test Anvil	1
USB Disk,	1	Dustproof Plastic Cover	1
Power line	1	Product Qualification Certificate	1
Touch pen	1	Instruction Manual	1



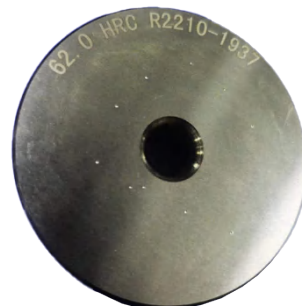
1.5875mm Ball Indentor



Diamond Rockwell Indentor



HRB Hardness Block



HRC Hardness Block(High)



HRC Hardness Block(Low)



150mm Flat Test Anvil



55mm Flat Test Anvil



40mm V-shape Test Anvil



Superficial Rockwell Block