Mikrosize®

UHT-100

Ultrasonic Hardness Tester

Contact us

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Mikrosize®

Features and Applications

Product Features

- Main test parameter: HV; Convertible parameters: HRC, HRA, HRB, HBW, etc.
- Large-size screen directly displays current measurement value, cumulative measurement value, maximum value, minimum value, average value, and unit conversion value.
- Small size and light weight, easy to carry, suitable for on-site measurement of large workpieces.
- High measurement accuracy: ±4%HV, ±4%HB, ±1.5HR. The accuracy can reach ±3%HV when used with a measurement platform (optional).
- Small test indentation, little damage to the workpiece, belonging to micro-destructive/near non-destructive testing.
- Fast measurement speed, with test results output in as fast as 1 second.
- Simple calibration: can store 5 groups of single-point calibration data, 1 group of default data, and 5 groups of multi-point calibration data in the instrument.
- Can store 50 groups of measurement data and 10 groups of calibration data sets.
- Single-point calibration is selected for materials with different elastic moduli, which is convenient and fast.
- For materials without clear conversion tables and unknown materials, any hardness scale can be selected for multi-point calibration to eliminate system errors caused by conversion tables.
- Any hardness scale can be customized in multi-point calibration mode.
- Can be connected to a Bluetooth printer (optional) to print measurement data or connected to a computer terminal to export measurement data.

  Executive standards: GB/T 34205; DIN 50159; ASTM-A1038; JB/T 9377; JJF 1436.

Product Applications

- On-machine inspection of parts in mechanical manufacturing to avoid errors caused by workpiece disassembly.
- Local hardness testing of aerospace and automotive parts (such as gear tooth surfaces, shaft surface hardened layers).
- Random hardness inspection of weld seams of special equipment and pressure vessels to ensure welding quality.

Product Details

Detail Display

- Handheld probe, small size, easy to carry.
- Supports 360° measurement, suitable for measuring large workpieces that are inconvenient to move or places that are difficult to reach with general measurement methods, such as tooth flanks and gear roots.
- Standard 2kgf probe; other optional force values: 1kgf, 2kgf, 3kgf, 5kgf, 10kgf.

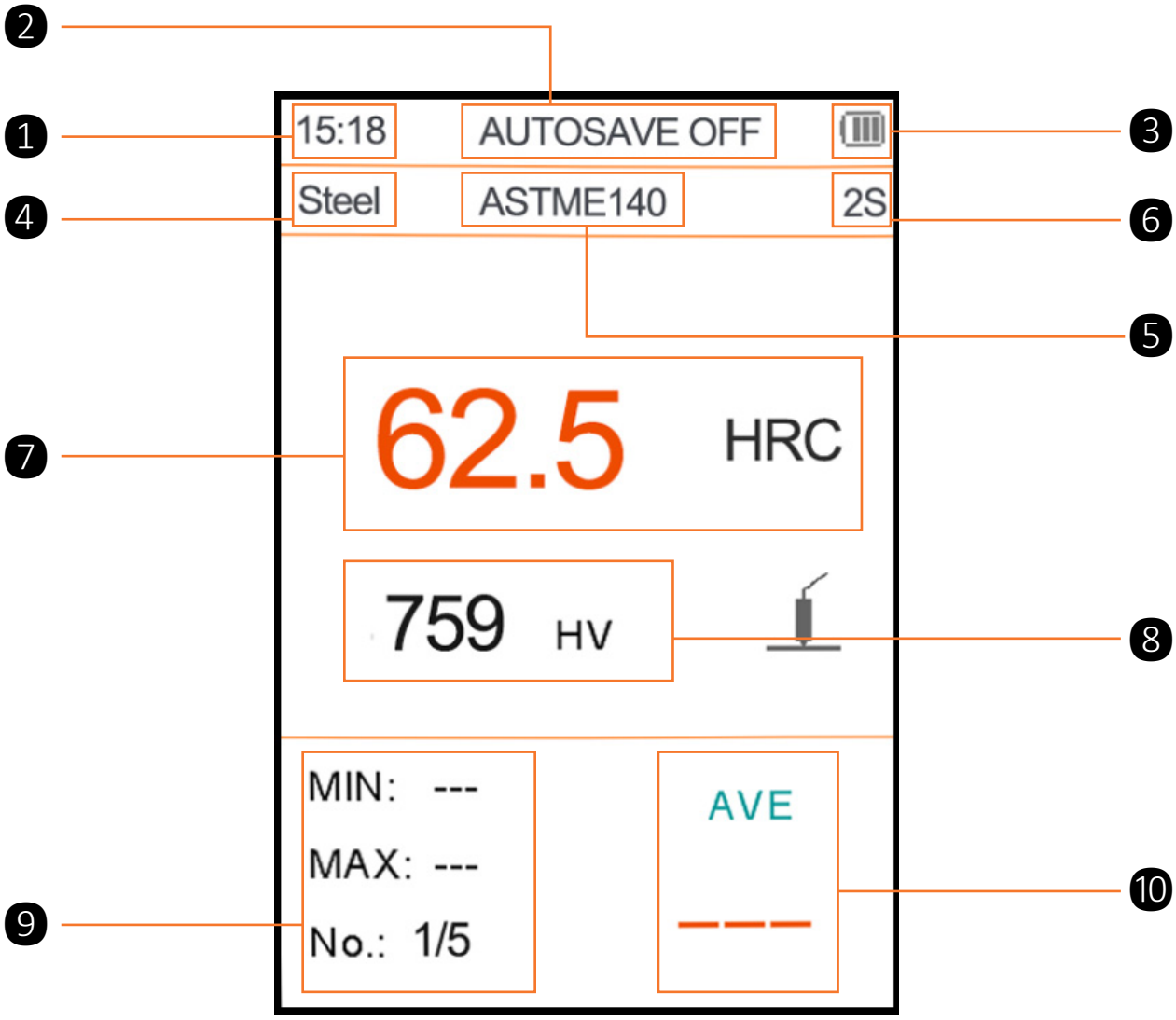
- The probe is connected to the host with an 8-core connecting wire.
- USB charging port with charging indicator light.

Instrument Appearance

1.Probe	2.Diaplay	3.ON/OFF	4.Enter
5.Esc	6.Delete	7.Menu	8. Direction Keys

Operation Interface

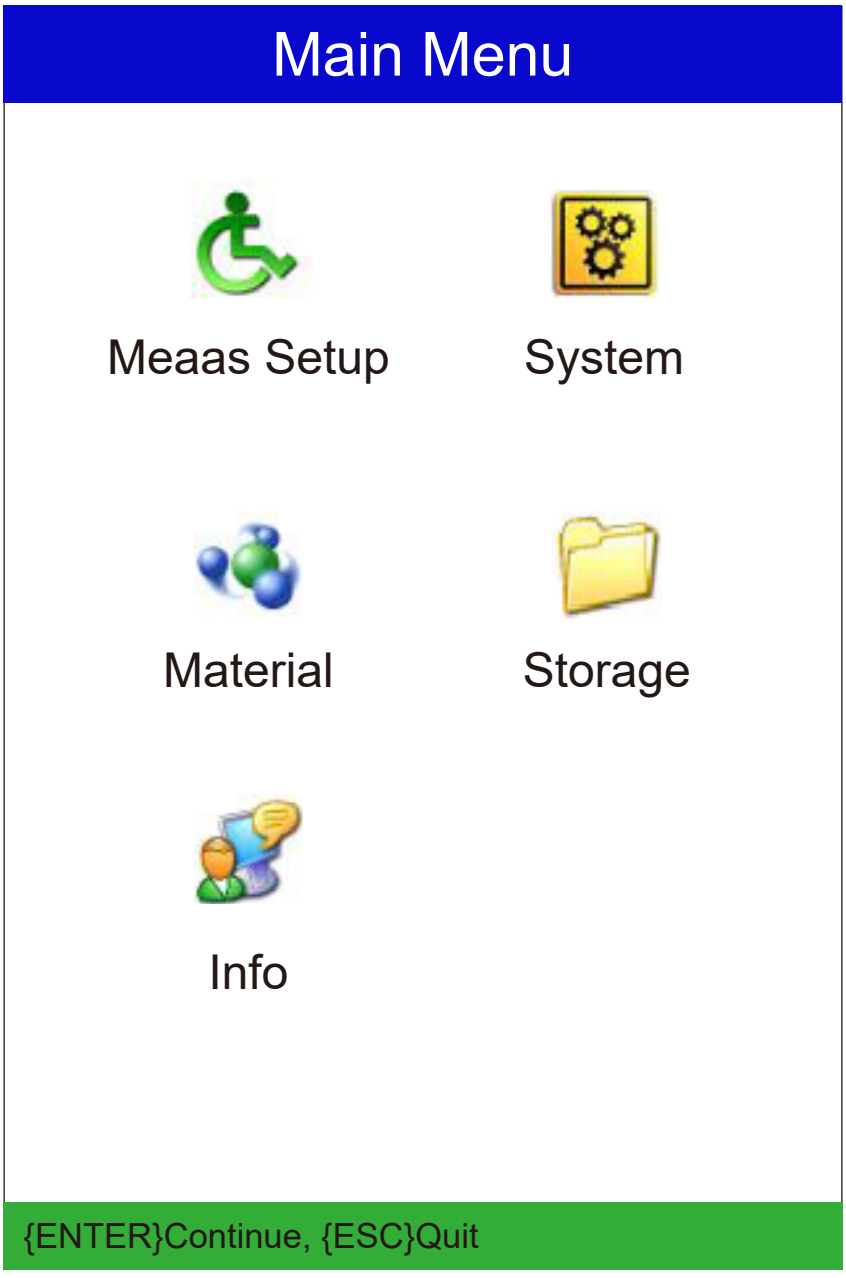
Main Interface



1. Time
2. Auto-Save
3. Battery Level
4. Calibration File Name
5. Standard
6. Dwell Time
7. Hardness Value Of The Selected Scale
8. Vickers Hardness Value (Hv)
9. Minimum Value, Maximum Value, Number Of Measurements
10. Average Value

Operation Interface

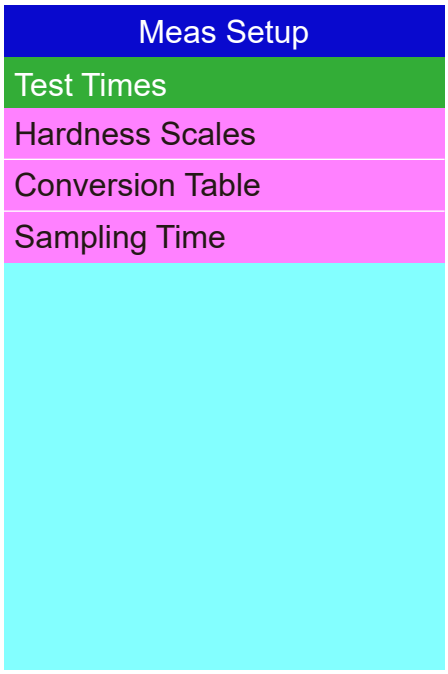
Menu

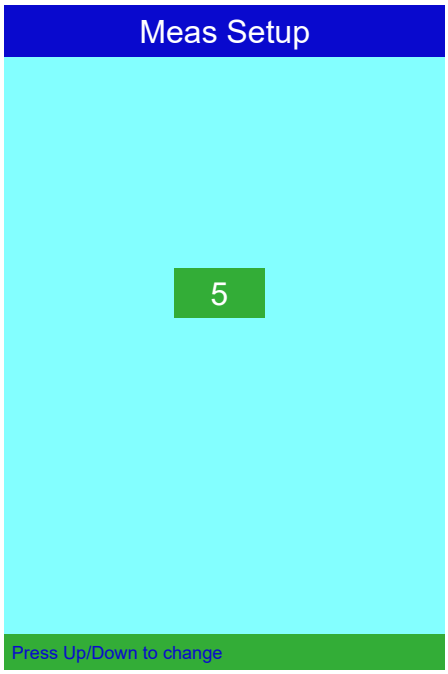


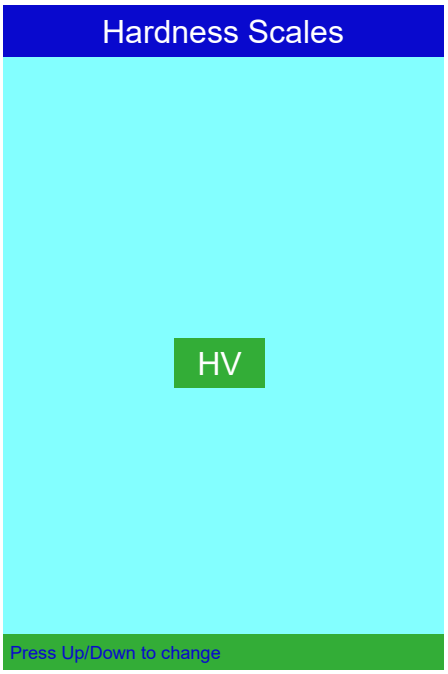
- Includes Five Parts: Measurement Condition Settings; System Settings; Material; Storage; Software Information

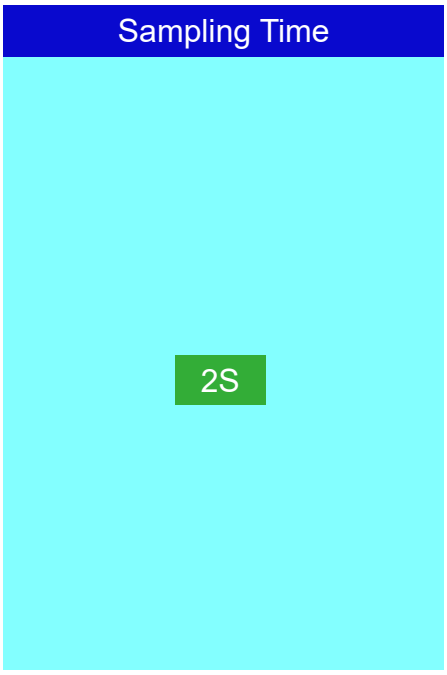
Operation Interface

Measurement Condition Settings









- Number of tests can be selected, default is 5 times, maximum can be set to 32 times.
- Hardness scale can be selected, 7 options available: HV/HRA/HRB/HRC/HB/HS/Mpa.
- 3 conversion standards: ASTM 140/ISO 18265/GBT 1172.
- Sampling time can be set, default is 2 seconds, optional range: 1s~5s, 0s is peak sampling.

Operation Interface

System Settings

System	
Auto save	OFF
Auto Transfer	OFF
Key Tone	OFF
Warning Tone	OFF
Time&Date	
Brightness	

{LEFT/RIGHT}Change

- Auto-save and auto-transmission functions: when turned on, data is stored at any time, and after a group of tests is completed, it is automatically up-loaded to the computer via USB.
- Control the on/off of key sound and warning sound.
- Set date and time.
- Adjust screen brightness, default is 20.

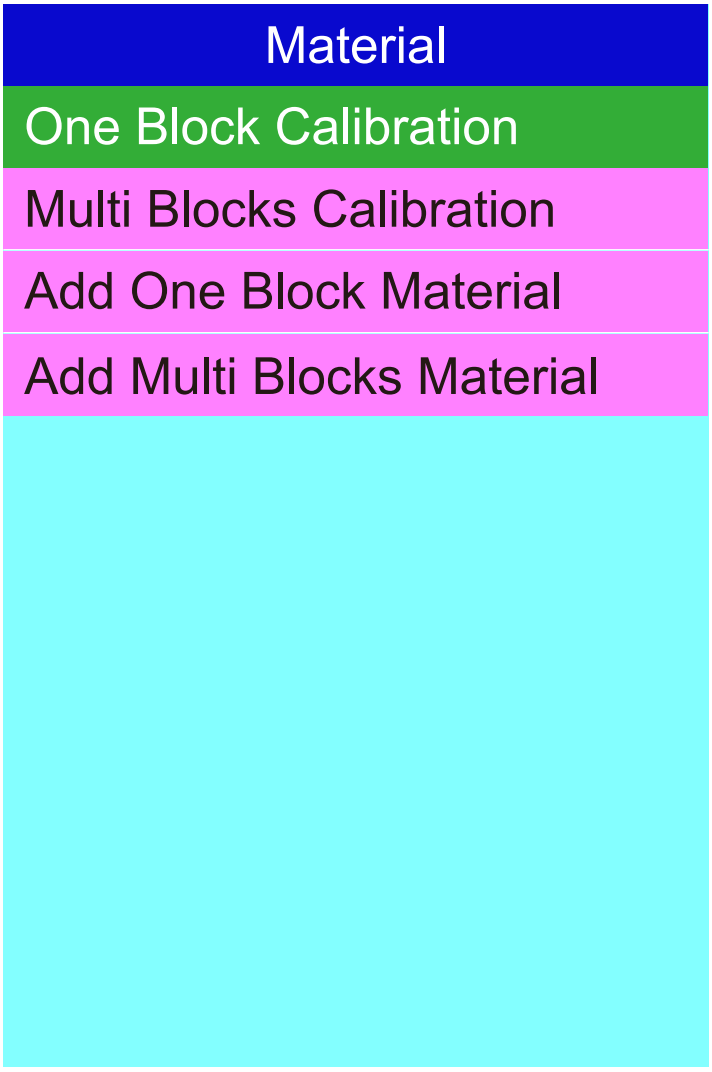
Storage Settings

- After auto-save is turned on, data can be browsed from the first group or the last group.
- Single group of data or all data can be deleted during browsing

Storage
Browse from the First
Broese from the Last
Delete All

Operation Interface

Material Menu



- Has single-point calibration and multi-point calibration functions, which can solve the elastic modulus calibration problem when replacing materials and the direct calibration problem of the direct hardness scale of materials.
- 5 groups of calibration files can be added, and calibration files can be deleted.

Technical Specification

Name	Ultrasonic Hardness Tester
Model	UHT-100
Measurement Units and Ranges	HV 50~1599,HRC 20~68,HRB41~100,HRA 61~85.6, HB 85~650,HS 34.2~97.3,MPa 255~2180
Test Accuracy	±4%HV；±4%HB；±1.5HR
Resolution	1HV；0.1HRC；0.1HB
Test Direction	Supports 360° measurement The indenter can measure when the angle with the measured surface is 90°±3°.
Battery Specification	Rechargeable battery, 3.6V, 3000mAh lithium battery
Battery Life	10 hours
Operating Conditions	Temperature: -10℃~40℃ Humidity: not more than 90%RH No strong electromagnetic interference
Host Dimensions (mm)	170*70*20
Probe Dimensions (mm)	Φ22*150
Weight	650g

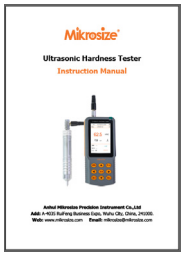
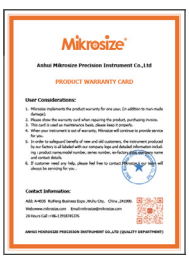
Probe Parameters

Probe Type	1kgf Manual Probe	2kgf Manual Probe	3kgf Manual Probe	5kgf Manual Probe	10kgf Manual Probe
Configuration	Optional	Standard	Optional	Optional	Optional
Actual Test Force	10N	20N	30N	50N	98N
Diameter	22mm	22mm	22mm	22mm	22mm
Length	150mm	150mm	150mm	150mm	150mm
Resonant Rod Diameter	2.4mm	2.4mm	2.4mm	2.4mm	2.4mm
Maximum Roughness of Measuring Surface	Ra＜3.2μm	Ra＜5μm	Ra＜5μm	Ra＜10μm	Ra＜15μm
Minimum Workpiece Weight	0.3kg	0.3kg	0.3kg	0.3kg	0.3kg
Minimum Workpiece Thickness	2mm	2mm	2mm	2mm	2mm
Probe Application Occasions	Ion nitrided dies, molds, fixtures, thin-walled parts, bearings, tooth flanks and pipe inner walls	Ion nitrided dies, molds, fixtures, thin-walled parts, bearings, tooth flanks and pipe inner walls	Ion nitrided dies, molds, fixtures, thin-walled parts, bearings, tooth flanks and pipe inner walls	Measuring grooves, tooth flanks and tooth roots	Small forgings, casting materials, weld inspection, heat-affected zones, low requirements for roughness

Standard Delivery

Name	Qty	Photo
Host	1 pc	
Manual Probe (2kgf)	1 pc	
Probe Connecting Wire	1 pc	
5V Charger	1 pc	
USB Cable	1 pc	

Standard Delivery

Name	Qty	Photo
Standard Hardness Block	1 pc	
Protective Equipment Case	1 pc	
Calibration Certificate	1 copy	
Instruction Manual	1 copy	
Qualification Certificate	1 copy	
Warranty Card	1 copy	

Optional Delivery

Name	Photo
Desktop Measurement Platform	
Portable Measurement Platform	
Bluetooth Printer	
Probes (1kgf; 3kgf; 5kgf; 10kgf)