Metrix+™
Innovative Excellence

WEBSTER HARDNESS TESTER

HT WB 01 & HT WB 01D

For Aluminium alloys

Measuring principle

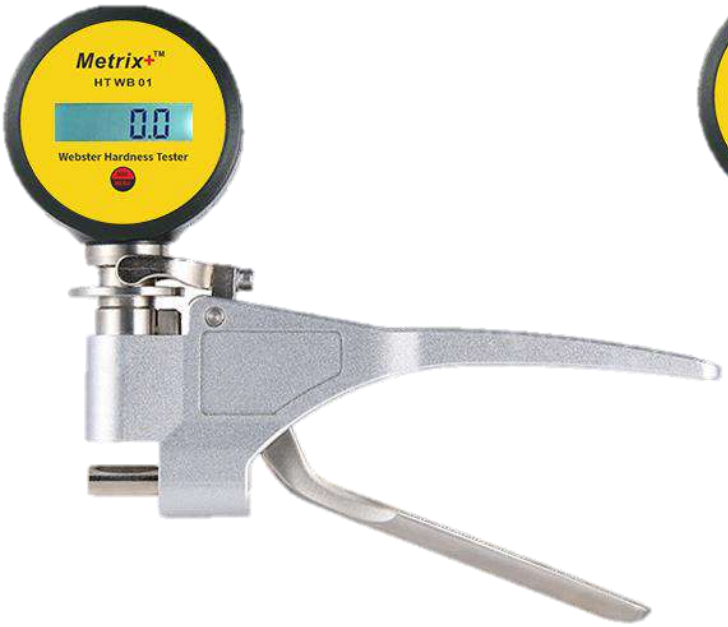
A needle of specific size is hard pressed on to the sample, and the depth of penetration is measured to estimate the hardness of the sample. Webster Hardness is mainly used to measure hardness of Aluminum and its alloys.

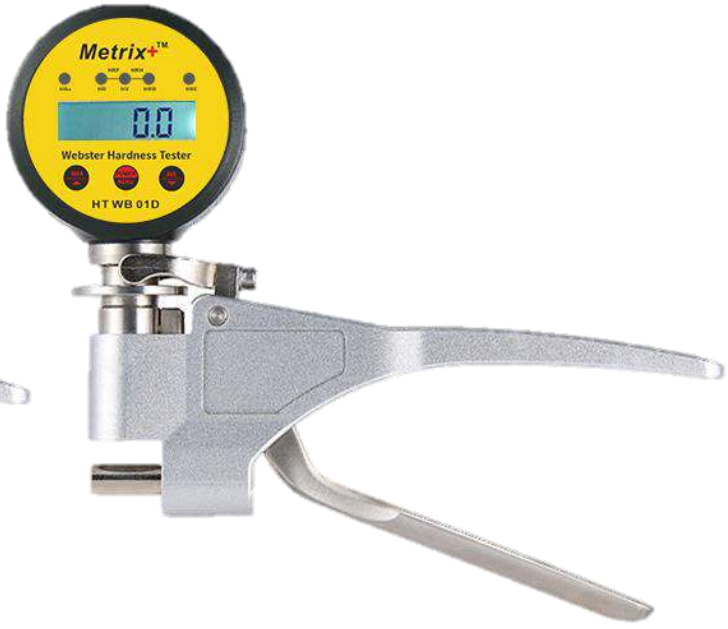
Applications

This can be used to quickly measure the hardness of aluminium alloys, aluminium pipes, plates, workpieces and other softer metal aluminium products.

Features

- Easy one-hand operation for quick measurements on site.
- Forged material anvil, sturdy upper handle.
- Presser/ needle can be easily changed on wear and tear.
- Avg/max and conversion to HBa/HB/HRF/HV/HRH/HRB/HRE scales (*only HT WB 01D*).





Presser/ Needle Type

Technical Specifications

Model	*Metrix+* HT WB 01	*Metrix+* HT WB 01D
Std Hardness scale	HW	
Range	0 ~ 20HW (low sensitivity <4HW and >17HW) 25 ~ 110HRE 58 ~ 131HV	
Accuracy	±2% (±5% <4HW and >17HW)	
Resolution	0.5HW	
Statistics	-	Avg and Max
Other Hardness Scales	-	HBa/ HB/ HRF/ HV/ HRH/ HRB/ HRE
Dimensions	220 x 160 x 30mm	
Weight	625g	
Power Source	2 x 1.5V AAA batteries	
Std accessories	Main unit, std webster block, presser/ needle, wrench, screwdriver, anvil handle, manual, case	
Optional accessories	Spare presser/ needle, std webster block	

conversion table

HW	HRE	HRF	HV
18	101	98.5	131
17	97	95	119
16	92.5	91	108
15	88	87.2	99
14	84	83	91
13	79.5	78	83
12	75	74	78
11	71	70	73
10	67	66	69
9	62.5	62.5	65
8	58	58	61
7	54	54	58
6	49.5	50	
5	45	46.5	
4	41		

1. Hw-hre relationship: According to the hardness conversion chart of Webster Company's instruction manual.
2. 2.HRE-HRF relationship: According to Webster Company's technical data "Soft Metal hardness value conversion table"

10. Factors affecting measurement accuracy

10-1 Sample: The surface of the sample should be cleaned. Dirt on the sample, especially fine sand particles, may affect it.

10-2 Sensitivity: The sensitivity of the instrument is significantly reduced in the range below 4HW and above 17HW, and the measurement accuracy is also reduced. Other hardness gauges should be considered in the above range.

10-3 Sample edge: During the test, the distance between the measuring point and the sample edge should be greater than 5mm, and close to the sample edge will affect the measurement accuracy.

10-4 Adjacent indentation: When testing, it should be noted that the distance between the two adjacent indentations should be no less than 6mm, otherwise, the former indentation will affect the accuracy of the following measurement.

10-5 oxide film: Although the hard oxide film is very thin, the accuracy of the hardness measurement of aluminum profiles will also be affected, experience shows that the thickness of 10μm oxide film will make the hardness measurement value higher by 0.5~1HW.

10-6 coating: Various coatings will seriously affect the measurement accuracy, so it is required to remove the coating with sandpaper or solvent before hardness measurement.