

Webster hardness tester

LW-20 series

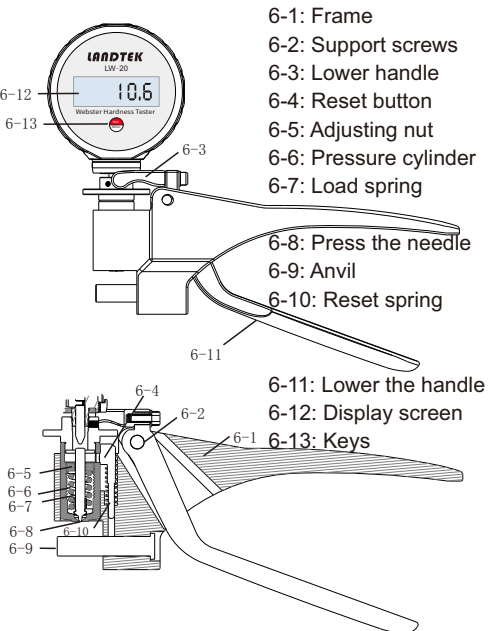
1. Product application

LW-20series Wechsler hardness tester is an instrument that can quickly test the hardness of aluminum alloy in the field. Wechsler hardness tester is easy to use,One card can, hardness value directly read. Used for rapid detection of aluminum alloy profiles, pipes, plates, aluminum workpieces and other soft The hardness of the metal. It is especially suitable for fast and non-destructive batch products at the production site, sales site or construction site Item by item inspection.

2. Product features

Press needle: new material, new process manufacturing of press needle, high hardness, long life, good interchangeability.
Handle: forged material, surface anodized upper handle, beautiful, wear resistant, pollution resistant.
Hardness block: The standard hardness block is tested by the standard hardness machine.
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High quality: fine parts processing, precision machine assembly, strict quality inspection.
Good stability: full degree point stability, correction point stability,
Easy conversion: Wechsler hardness value can be converted into Vickers, Rockwell, Brinell and other hardness values.

When you buy this instrument, you are taking a step forward in the field of precision measurement. The watch is a computer-centered test tool that, if properly operated, is robust enough to last for many years. Please read this manual carefully before use and keep it in an easily accessible place.



3. Technical parameters

range	0~20HW
precision	0.5HW
weight	625g
dimension	220*160*30mm
battery	2*1.5AAA
measuring range	Figure 1

4.Accessories

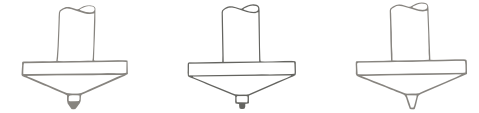
Standard Accessories		Optional accessories
Host machine	Anvil seat cover (LW-20A)	Spare presser
Standard Wechsler hardness block	specification	
Spare presser	Portable instrument case	Standard Wechsler hardness block
Special wrench		
Small screwdriver		

5. Instrument model table

model	Applicable material	hardness range	specimensize/mm
LW-20	aluminium alloy	25~110HRE	thick0.6-6 inner diameter>10
LW-20A			thick0.6-13 inner diameter>10
LW-20B			thick0.6-8 inner diameter>6
LW-B75	Hard or semi-hard brass, superduralumin	63~105HRF	thick0.6-6 inner diameter>10
LW-B75B			thick0.6-8 inner diameter>6
LW-BB75	Soft brass, red copper	18~100HRE	thick0.6-6 inner diameter>10
LW-BB75B			thick0.6-8 inner diameter>6
LW-B92	Cold rolled steel plate, stainless steel	50~92HRB	thick0.6-6 inner diameter>10


6. Instrument structure diagram

The pressure needle of different models of Wechsler hardness tester is different, as shown in the figure:



LW-20type LW-B75、LW-BB75type LW-B92type

7. Operation method

7-1. Correction
Press the handle down and press the button  straight Until "CAL" appears on the display. Note: Model LW-20A is fitted with anvil seat cover before calibration.

7-2 Operations
Place the sample between the anvil and the pressor and check the handle until it feels pressed to the bottom. The display appears A reading, this reading is the measured hardness value. Excessive pressure beyond this limit will not hurt Bad hardness tester, either Any twist or movement will make the reading inaccurate.

7-3 Hardness block test
Test standard Wechsler hardness blocks with a durometer. For the LW 20 series Wechth hardness tester, the reading is the hardness value labeled on the hardness block, the maximum allowable error is $\pm 0.5HW$, for the LW-B75, LW-B75B, LW B92 Wechth hardness tester, the reading should be $5HW \pm 0.5HW$, LW-BB75B, LW-BB75 Wechth hardness tester, The reading should be $17HW \pm 0.5HW$. If the test readings do not meet the requirements, the operator should frequently use the Wechsler hardness block to check the accuracy of the instrument. If any deviation is found, it should be corrected in time. When testing the hardness block, only the positive surface of the hardness block should be used.

8. Replace the pressure pin

If you cannot read to 20 by adjusting the adjusting screw, the pressure needle is worn and should be replaced with a new pressure needle.

Pressure needle replacement method:

Turn the needle support screw, remove the lower handle from the frame, and then remove the meter from the pressure cylinder, the pressure cylinder remains in the frame. At this time, a slotted adjusting nut can be seen in the pressure cylinder. Take out the adjusting nut with the special wrench equipped with the instrument, then take out the pressure needle and replace it with a new pressure needle. Then you can correct it. After replacing the pressure pin, adjust the pressure of the load spring with the adjusting nut. After feeling the resistance of the load spring, the nut can be tightened once (according to the standard Wechsler hardness block, if there is any deviation, tighten the nut or loosen the nut.) During the initial setting, the pressure of the load spring is too high, which will damage the pressor tip.

9. Maintenance and maintenance

This instrument is a precision instrument, and its service life depends on whether the use method is correct and whether the maintenance is timely and appropriate. Pay attention to anti-fouling, anti-rust, anti-fall, do not disassemble. Remove the battery when not in use.

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 10 μ m 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.

11. Needle change method



① Unscrew the handle nut



② Remove the pressure cylinder

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③ Twist the pressure cylinder with the configuration wrench



④ Take out the pressure needle and replace it with a new needle

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