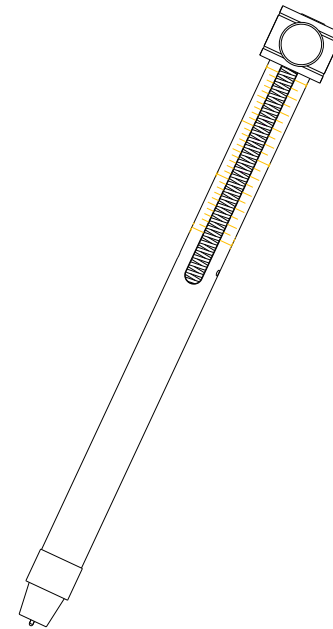


Hardness Tester User's Manual

HT-6510NT



User's Manual

Thank you for purchasing the product. To make it convenient for you to use the product, this manual offers a brief introduction to its various functions. Please read the manual carefully before using the product.

I. Overview

Compress and deform the spring to impose the force generated onto the tester head with a pre-defined diameter. Scratch on the surface of the coating with the tester head to check whether the coating surface is damaged. The test result is expressed in Newton.

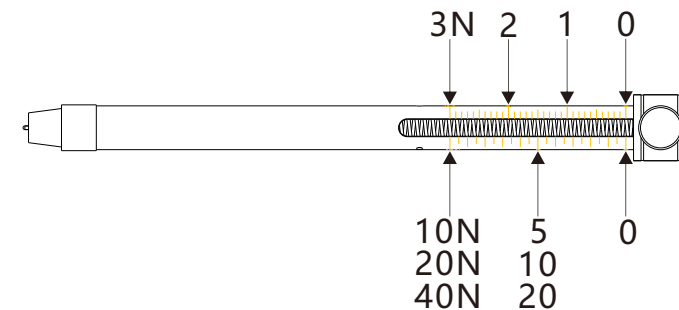
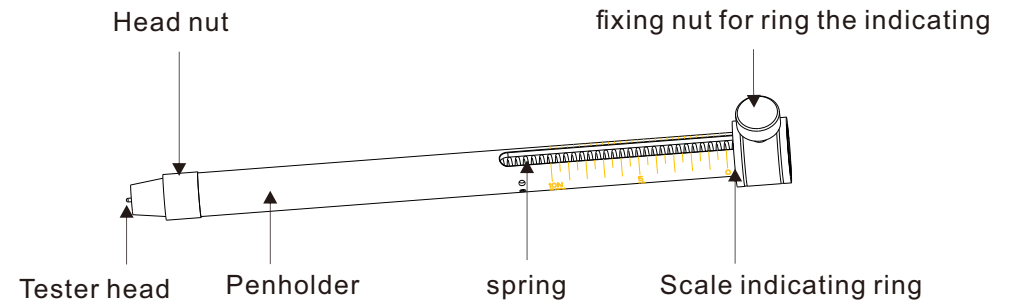
Hardness Tester, also called Newton Pen, was invented by Robert Bosch GmbH from Germany. It can accurately measure and record hardness of various things (e.g., the hardness of coatings, plastics, wood, or metal materials). The measurement surface can be a flat or curved surface, and there is no limit on the size of the surface area. The tester has stable performance and portable size, and is easy to use.

The hardness tester is carefully designed by our company in reference to similar products abroad and actual using methods in China. It is quite simple and convenient to use our product: set the estimated or predefined pressure at the spring by pushing the slider; put the tester on the surface under testing vertically and draw a line of 5-10 mm at a speed of 10mm/ second. Then, a visible scratch can be observed at the tester header. If the pressure is too high, the scratch will be very clear. If the pressure is too low, no scratch can be observed. The required pressure can be controlled by locking the slider, and the unit is Newton.

II. Technical parameters

1. Material of the spring: spring steel
2. Material of the tester head: tungsten carbide
3. Three diameters of the tester head: 0.5mm (Opel, optional); 0.75mm (Bosch, standard); 1.0mm (optional) (in accordance with ISO1518 and DEF)
4. Measurement range of the spring: 0~3N (blue mark), 0~10N (red mark), 0~20N (yellow mark), 0~40N (white mark), (optional)
5. size: 18mm(ϕ) \times 180mm(L)

III. Instrument structure diagram



IV. Testing Steps

1, according to the hardness of the sample to be tested, choose the appropriate range of spring: directly loosen the pen nut, install the required spring.

2, loosen the indicator ring fixing nut, adjust the position of the scale indicator ring, adjust the required pressure. For example, if the pressure of 5N is needed, the red spring with a range of 0-10N is selected first, and then the lower ring of the scale indicating ring faces the red indicating line "5N" position.

3. Place the hardness test pen on the surface of the sample vertically (ensure that the test head can contact the surface of the test plate vertically), and draw a straight line of 5 ~ 10mm at the speed of 10mm/s.

4, check whether the surface of the test plate appears scratches, if the spring pressure is too high, the scratches will be very clear; if the spring pressure is too low, no scratches will appear. At this time, a higher pressure can be selected until the required level of scratches is achieved.

V. Maintenance

1. After using the product, please clean the tester head, loosen the spring locking screw, take out the spring pressure block and spring, and then clean the penholder with a piece of soft cloth.

2. In order to guarantee measurement accuracy and extend the service life, please maintain the scale indicating ring at the '0' position when the tester is not used.

3. The tester head can't bear strong impulsive force. Please put the tester into the packaging box after using it.

4. Check the tester head with magnifying glasses regularly to ensure there is no damage on the smooth surface, otherwise the tester head should be replaced.

5. The spring equipped for the tester before delivery has been calibrated precisely, please do not pull it forcefully. If any rust on the spring or uneven axial pitch distance is found, please replace the spring with a new one.

VI. Packing list

| Name | Quantity | Optional |
|------------------------------|----------|------------|
| Hardness test tip 0.5mm | 1 | (optional) |
| Hardness test tip 0.75mm | 1 | |
| Hardness test pen tip 1mm | 1 | (optional) |
| Penholder | 1 | |
| 3N pressure spring (blue) | 1 | |
| 10N pressure spring (red) | 1 | |
| 20N pressure spring (yellow) | 1 | |
| 40N pressure spring (white) | 1 | (optional) |
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