



## Digital Superficial Rockwell Hardness Tester NOVOTEST TB-SR-C



### ◀Description▶

Digital Superficial Rockwell Hardness Tester TB-SR-C implements direct Rockwell method of hardness testing in accordance with **ISO 6508-2, ASTM E18**.

Digital Superficial Rockwell Hardness Tester NOVOTEST TB-SR-C is an advanced device among the other superficial Rockwell hardness testing equipment models. With large LCD digital screen, convenient menu structure to display and manipulate measurements results, and its reliable and stable performance it is an outstanding device in its class.

High convenience is provided with digital control elements, that lets to choose, and exchange superficial Rockwell hardness scales, making test, saving and printing the results, and processing them with optional data processing software. The bench Superficial Rockwell hardness tester has the hyper terminal setting RS-232 with good reliability, excellent operation and easy watching.

The Rockwell hardness test uses the method of measuring indentation depth. The hardness values are read directly through the LCD screen. Therefore, it is easy to operate the hardness tester with high efficiency. This hardness tester with low testing load is suitable for inspect thin sheets of steel. Digital Superficial Rockwell Hardness Tester NOVOTEST TB-SR-C allows to use the diamond



indenter and ball indenter, which can measure the hard and the soft samples. Superficial Rockwell hardness test, the test force is small, less damage on the surface of the same material, the surface than Rockwell hardness test Rockwell hardness test indentation depth is much smaller, so it can adapt to the measurement of small parts and thin specimens and surface hardness of nitriding, cyanide, carburizing parts. So, it has been widely used in production to become the most detecting device for inspecting the product quality and determining the reasonable processing technology.

## ◀Application▶

Digital Superficial Rockwell Hardness Tester NOVOTEST TB-SR-C allows user to measure hardness of:

- carbide, nitride steel, hardened steel, steel;
- surface hardening steel, hardened steel, knife, sheet steel;
- quenched and tempered steel, cast iron and hard edges and other parts;
- annealed copper alloys, thin soft steel, brass and bronze sheet;
- thin mild steel, lead alloy, copper alloy, brass, bronze, malleable iron aluminum alloy;
- pearlite iron, copper, nickel, zinc, nickel alloy sheet, annealed steel.

## ◀Advantages▶

Digital model has following advantages against analog machine:

- more convenient in operating;
- measurement process is faster;
- setting menu is easy in use (setting of scales, loads and dwell time etc.);
- digital resolution is better. Thus, accuracy is higher than manual tester has;
- RS-232 interface;
- human factor influence is minimum.

The machine allows user to:

- select the Rockwell hardness scales type (A, B, C, D, E, F, G, H, K);
- recalculate the obtained hardness values into all hardness scales (Brinell, Rockwell and Vickers);
- record test results under the particular operator;
- print the results of hardness measurements via built-in printer;
- Automated load/unload system allows user to get measurement results of high accuracy and free of operator faults;
- measure hardness of small parts and thin specimens and surface hardness of nitriding, cyanide, carburizing parts.

**◀Specification▶**

Indenter	<ul style="list-style-type: none"><li>- Conical Rockwell diamond indenter (120 °): diamond tip as a cone with 120 degrees of the cone apex angle and the bead size of 1/16 inch (1.5875 mm)</li><li>- Hard alloy steel Rockwell ball indenter (d=1,5875mm)</li></ul>
Scales	Rockwell: HR15N:70-94; HR30N:42-86; HR45N:20-77; Superficial Rockwell: HR15T:67-93; HR30T:29-82; HR45T:10-72.
Hardness resolution value	0.5HR
Conversion scales	HRF:60-100; HRG:30-94; HRH:80-100; HRK:40-100
Initial testing load (accuracy ±2%)	29,42N (3kg)
Testing load (accuracy ±1%)	147,1N (15kg); 294,2N (30kg); 441,3N (45kg)
Measuring time	2~60 sec
Testing materials	Rockwell scale: <ul style="list-style-type: none"><li>• carbide, nitride steel, hardened steel, steel;</li><li>• surface hardening steel, hardened steel, knife, sheet steel;</li><li>• quenched and tempered steel, cast iron and hard edges and other parts;</li></ul> Superficial Rockwell scale: <ul style="list-style-type: none"><li>• annealed copper alloys, thin soft steel, brass and bronze sheet;</li><li>• thin mild steel, lead or copper alloy, brass, bronze, malleable iron, aluminum alloy;</li><li>• pearlite iron, copper, nickel, zinc, nickel alloy sheet, annealed steel.</li></ul>
Max height of test sample	100 mm (without protective cover – 170 mm)
Max depth of test sample	135 mm
Data output	<ul style="list-style-type: none"><li>• LCD</li><li>• Built-in printer</li><li>• RS-232 interface</li></ul>
Recommended operating conditions	<ul style="list-style-type: none"><li>• Air temperature: 0...+40 °C</li><li>• Air pressure: 94 – 106.7 kPa</li><li>• Humidity: up to 65%</li></ul>
Net weight	65 kg
Gross weight	70 kg
Package dimensions	610*400*800 mm (L*W*H)
Power supply	220V±5%, 50~60Hz



## ◀Standard set▶

- Rockwell Hardness Tester NOVOTEST TB-SR-C
- Conical Rockwell diamond indenter (120 °)
- Hard alloy steel Rockwell ball indenter (d=1,5875 mm)
- Weight (3pcs)
- Large testing table
- Medium testing table
- V-shaped testing table
- Superficial Rockwell hardness test blocks (4 pcs. in total):
  - HR15N – 1pc.
  - HR15T – 1pc.
  - HR30N – 1pc.
  - HR30T – 1pc.
- RS-232 interface
- Bolt adjustor (4 pcs.)
- Power cable
- Fuse (2pcs.)
- Operating manual
- Calibration certificate
- Transportation box

## ◀Available options▶

- Indenters
- Standard hardness test blocks
- Large testing table
- Medium testing table
- V-shaped testing table
- Bolt adjustor
- Power cable
- Fuse