



NOVOTEST

Digital Brinell Hardness Tester NOVOTEST TB-B-C



Datasheet

2022

1. Introduction

Digital Brinell Hardness Tester NOVOTEST TB-B-C implements direct resistance to indentation under Brinell method of hardness testing in accordance with ISO 6506-2 and ASTM E10.

Application

Brinell hardness tester uses the heavy testing force (large indentation), which allows user to measure:

- hardness of coarse-grain metal materials (casted parts, non-ferrous metals and alloys);
- hardness of various tempered steels, hardening and tempering steels;
- hardness of products from soft metals (pure aluminium, lead, tin) and others.

Description

Digital Brinell Hardness Tester NOVOTEST TB-B-C has 10 steps testing force settings, allows user to measure hardness values with each of 10 Brinell hardness scales. The device uses the round type of indenter along with the control system. It is highly accurate, gives repeatable results, reliable and easy to operate.

Digital Brinell Hardness Tester NOVOTEST TB-B-C has fully automatically test cycle: loading, dwell and unloading. As a result, the operator errors don't influence on measuring results.

Motorized indenter and electronic control system allow making measurements with high accuracy. Absence of mechanical weighs reduce problems of friction and vibration sensitivity of the machine.

2. Specifications

2.1 Advantages

- 10 test loads
- Easy to choose the hardness scale
- Automatic controlling the force of load
- Easy in operation

2.2 Specifications

Indenter	Hard alloy ball indenters (2,5; 5 and 10 mm)
	•HBW2.5/62.5
	•HBW2.5/187.5
	•HBW5/62.5
	•HBW5/125
	•HBW5/250
	•HBW5/750
Scales	•HBW10/100
	•HBW10/250
	•HBW10/500
	•HBW10/1000
	•HBW10/1500
	•HBW10/3000

2.2 Specifications

Conversion to other scales	Manually, using the conversation tables for Rockwell and Vickers scales
Testing load	<ul style="list-style-type: none"> •62.5kgf (612.9N) •100kgf (980.7N) •125kgf (1226N) •187.5kgf (1839N) •250kgf (2452N) •500kgf (4903N) •750kgf (7355N) •1000kgf (9807N) •1500kgf (14710N) •3000kgf (29420N)
Testing materials	<ul style="list-style-type: none"> •Steel and cast iron •Coarse-grain metal materials (casted parts, non-ferrous metals and alloys, copper and copper alloys) •Tempered steels, hardening and tempering steels •Soft metals (pure aluminium, lead, tin) and others
Hardness range	8-650 HB
Measuring time	5~60 s
Microscope zoom	20X
Microscope accuracy	0.005 mm (5.0 um)
Minimum size of testing products	0.005 mm (5.0 um)
Max height of test sample	220 mm (can be produced another model up to 500 mm)
Max depth of test sample	135 mm (can be produced another model up to 200 mm and with 500mm height)
Data output	<ul style="list-style-type: none"> •Microscope •Built-in printer •RS-232 interface
Power supply	220V±5%, 50~60Hz
Recommended operating conditions	<ul style="list-style-type: none"> •Air temperature: 0...+40 °C •Air pressure: 94 – 106.7 kPa •Humidity: up to 65%
Net weight	130 kg
Gross weight	140 kg
Pakage dimensions	670*470*866 mm (L*W*H)

2.3 Available options

- Indenters
- Standard hardness test blocks
- External 20X measuring microscope
- Large testing table (15cm)
- Medium testing table (8cm)
- V-shaped testing table (10cm)
- Bolt adjustor
- Other kinds of power supply
- Power cable
- Fuse

2.4 Standard package

- Brinell Hardness Tester NOVOTEST TB-B-C
- Hard alloy steel ball indenters (d=2.5; 5 and 10 mm – 3 pcs. in total)
- External 20X measuring microscope
- Large testing table (20cm)
- Medium testing table (6cm)
- V-shaped testing table (8cm)
- Brinell hardness test blocks (3 pcs. In total)
 - HBW/3000/10(150~250) – 1pc.
 - HBW/1000/10(75~125) – 1pc.
 - HBW/187.5/2.5(150~250) – 1pc.
- Bolt adjustor (4 pcs.)
- Power cable
- Fuse (2pcs.)
- Operating manual
- Calibration certificate
- Transportation box