

**NEXUS 8003B/HBT**



# NEXUS 8003B/HBT

## Heavy duty Brinell hardness tester



## Features

The NEXUS 8003B is a Brinell hardness tester with a test load ranging from 5kgf/49N until 3000kgf/29kN. Beside the testing and indentation measurement with a Brinell microscope the NEXUS 8003B also has the option of Brinell depth (HBT) procedures (Model 8003HBT, Automatic Brinell hardness testing by measuring indentation depth).

The NEXUS 8003B/HBT Brinell hardness tester includes all standard hardness testing methods between 5kgf/49N until 3000kgf/29kN). All procedures meet or exceeds ASTM-E10, ISO 6506 standards.

The tester contains high-quality mechanical components and is based on a load-cell, closed loop force feed-back system. The advanced user interface IMPRESSIONS™ controls the automatic testing procedure and offers many functions, such as fully automatic indent measuring and data storage.

The NEXUS 8003B/HBT Series is designed to perform under very harsh conditions and polluted environment.

### Applications

- Hardness of castings and forgings
- For flat and cylindrical work pieces
- Wide application within the automotive industry
- Heavy duty workshop testing
- Sample testing or quality control testing

## IMPRESSIONS™, Firmware

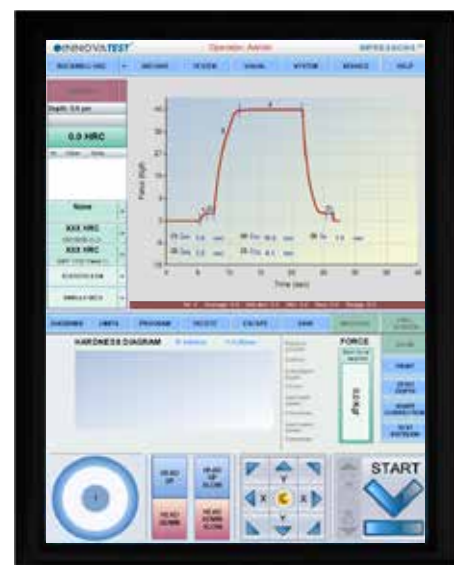
IMPRESSIONS™ is the advanced user operating system of the NEXUS 8003B/HBT. The software controls all operation of the tester including file storing, report printing, test program storage and many other advanced functions.

The firmware converts to 3 different hardness (and tensile) scales simultaneously. The conversions can be set to material and standard (ASTM-E10, ISO 6506).

The system also controls an (optional) X-Y stage, rotary or inclining table that can be plugged into the optional built-in drivers of the tester. No external devices required.

In combination with an (optional) X-Y stage, the tester offers the option of running case depth hardness programs, pre-defined testing patterns and/or other specific or special tasks defined by the user.

All data can be copied or exported in to MS applications like Word, Excel, or a report generator that emails test results directly to your workstation, or server. All data can be accessed over the LAN or WLAN connections.



# Technical specifications

<b>NEXUS 8003B/HBT</b>	
Hardness scales 8003B	Brinell
Hardness scales 8003HBT	Brinell, Brinell depth (HBT)
Load application	Load cell, force feedback, closed loop system
Load range	5kgf/49N - 3000kgf/29kN
Optical system	Brinell microscope
Electronic system	High performance embedded micro PC, MS Windows®, 15" full color touch screen, automatic and manual measurement
Standards	Meets or exceeds, ASTM-E10, ISO 6506
Test loads	5kgf/49N, 6.25kgf/62N, 10kgf/98N, 15.625kgf/153N, 20kgf/196N, 25kgf/245N, 30kgf/294.2N, 31.25kgf/306N, 50kgf/490N, 62.5kgf/612N, 100kgf/980.7N, 120kgf/1176N, 125kgf/1225N, 187.5kgf/1838N, 250kgf/2.45kN, 500kgf/4.9kN, 750kgf/7.35kN, 1000kgf/9.8kN, 1500kgf/14.7kN, 3000kgf/29kN
Brinell test range	HB1: 5kgf/49N, 10kgf/98N, 30kgf/294.2N HB2.5: 6.25kgf/62N, 15.625kgf/153N, 31.25kgf/306N, 62.5kgf/612N, 187.5kgf/1838N HB5: 25kgf/245N, 62.5kgf/612N, 125kgf/1225N, 250kgf/2.45kN HB10: 100kgf/980.7N, 250kgf/2.45kN, 500kgf/4.9kN, 750kgf/7.35kN, 1000kgf/9.8kN, 1500kgf/14.7kN, 3000kgf/29kN HBT: 5kgf/49N, 250kgf/2.45kN Depending on model
Test cycles	Fully automatic, automatic and manual
Force tolerance	<1%
Force control	1 - 99 seconds
Connectivity	USB (4), UTP-RJ45-LAN, W-LAN, RS232, Motorized X-Y stage
Workpiece accommodation	Vertical capacity 350mm, Horizontal capacity 260mm (from center-line)
Operating temperature	10°C to 35°C, non-condensing
Machine dimensions	380mm x 728mm x 1390mm
Machine weight	370kg
Power supply	100V AC to 240V AC, 50Hz/60Hz, single phase

## Standard delivery

- Testing table, hardened,  $\varnothing$ 200mm
- Brinell microscope
- Wireless mouse and keyboard
- Power cable
- Four adjustable feet
- INNOVATEST® calibration certificate
- Installation and user manual

## Optional accessories

- Certified indentors (UKAS, DKD, ASTM)
- Certified reference hardness blocks (UKAS, DKD, ASTM)
- V-anvil, hardened,  $\varnothing$ 80mm
- Large testing table, 350mm x 250mm, with T-grooves
- Extra large testing table, cylinder head 450mm x 350mm, with grooves and support
- Cylinder head/blok test table, 650mm x 400mm
- Motorized X-Y stages, motorized rotary or tilting tables
- Built-in 5 axis support driver
- Brinell optical scanning system
- Solid tester table and storage cabinet



*NEXUS 8003B/HBT equipped with (standard) testing table  $\varnothing$ 200mm.*



*The NEXUS 8003B/HBT can be equipped with manual and motorized X-Y stages. Above picture shows optional 250Kgf motorized X-Y stage*



*The optional 450mm x 350mm large testing table with T-slots can be used for large and heavy workpieces.*

## Order details

### **NEXUS 8003B**

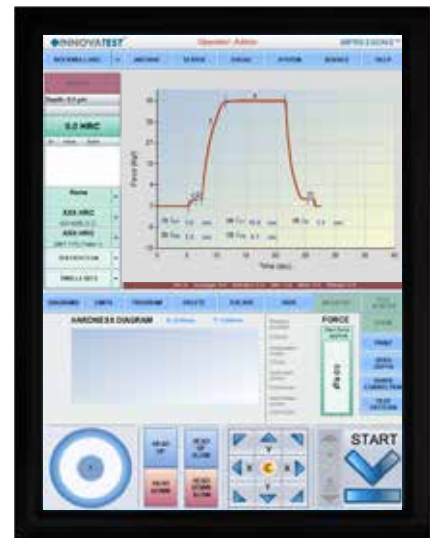
Heavy duty Brinell hardness tester, test forces 5kgf/49N until 3000kgf/29kN

### **NEXUS 8003HBT**

Heavy duty Brinell hardness tester with Brinell, HBT, test forces 5kgf/49N until 3000kgf/29kN

# NEXUS 8003B/HBT

## Heavy duty Brinell hardness tester



NEXUS 8003B/HBT has an advanced report generator allowing you to print sophisticated customized result reports and statistics.

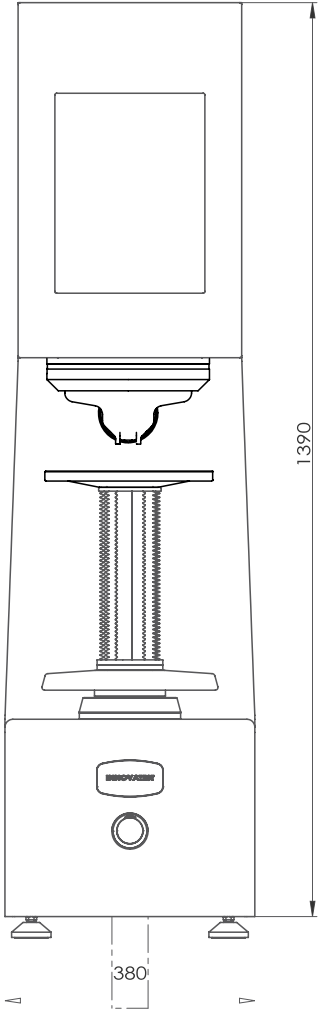
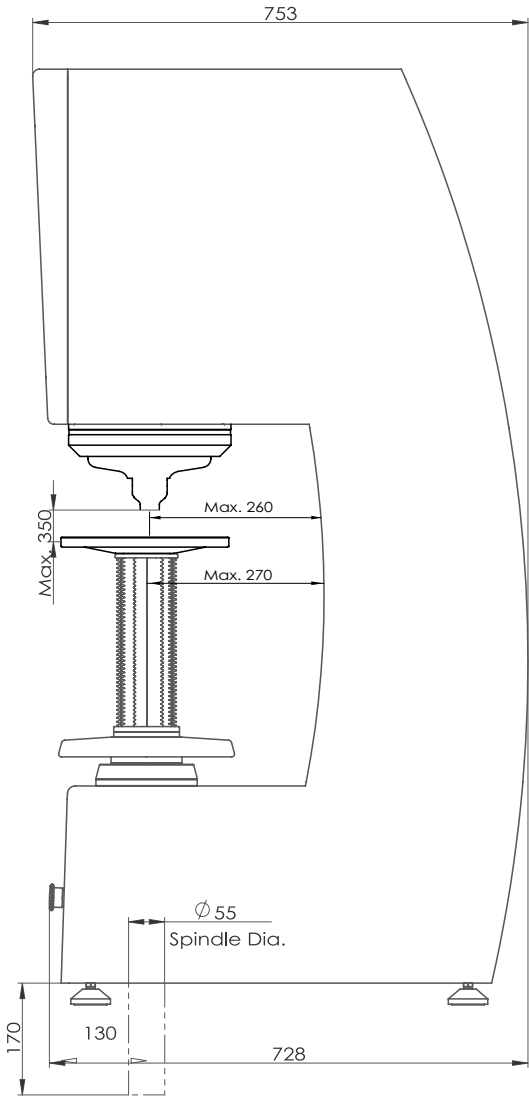
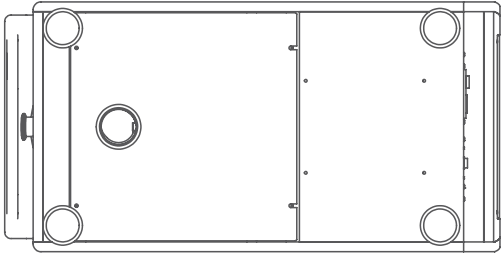
NEXUS 8003B/HBT can be equipped with an automatic motorized spindle (optional) which makes it possible to position your workpiece without any effort.

IMPRESSIONS™ hardness testing firmware and workflow control.



# Technical drawing NEXUS 8003B/HBT

All dimensions are in mm



Represented by:

IN13-116 130315

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