

NEXUS 7501



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Universal hardness tester



Industrial touch screen, embedded high performance PC with two HD drives

Automatic indent measurement with ZOOM function

IMPRESSIONS™ advanced hardness testing software, includes file storage, test program storage, machine settings storage, etc.

Bright LED illumination (ringlight optional)

Connectivity USB, UTP-RJ45-LAN, W-LAN

Including workpiece clamping attachment

High precision spindle

Motorized automatic spindle (optional)

Features

The NEXUS 7501 can be used for all hardness procedures according to standards. Rockwell, Superficial Rockwell, Brinell, Vickers and Knoop. But it also can do ball and indentation hardness testing for thermo plastics and the new Vickers depth (HVT) and Brinell depth (HBT) procedures.

The NEXUS 7501 universal hardness tester includes all standard hardness testing methods between 0.5kgf/4.9N - 250kgf/2.45kN. All procedures meets or exceeds DIN, ISO, ASTM and JIS.

The tester contains high-quality mechanical components and is based on a load-cell, closed loop force feed-back system. The MS Windows® tester software IMPRESSIONS™ controls the automatic testing procedure and offers fully automatic indent measuring and data storage. The integrated camera with calibrated zoom function guarantees fast, and accurate user-independent Vickers or Brinell measurement.

The test load ranges from 0.5kgf/4.9N to 250kgf/2.45kN

Applications

- Hardness of castings and forgings
- For flat and cylindrical work pieces
- Wide application within the automotive and aerospace industry
- Laboratory and workshop testing
- Sample testing or quality control testing
- Steels, non-ferrous metals
- Cemented carbide, ceramics, stainless steels

IMPRESSIONS™, Firmware

IMPRESSIONS™ is the advanced user operating system of the NEXUS 7501. The software incorporates, manual and automatic measurement for all scales, image editing, file storing, image storing, report printing, swivel operation, manual or automatic focusing 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 (ISO/ASTM/GB).

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 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

NEXUS 7501	
Hardness scales	Brinell, Vickers, Rockwell, Superficial Rockwell, Knoop, Vickers depth (HVT), Brinell depth (HBT), Ball indentation
Load application	Loadcell closed loop, force feedback system
Load range	0.5kgf/4.9N - 250kgf/2.45kN
Test loads	0.5kgf/4.9N, 1kgf/9.8N, 2kgf/19.6N, 2.5kgf/24.5N, 3kgf/29.4N, 4kgf/39.2N, 5kgf/49N, 6.25kgf/61.29N, 10kgf/98N, 13.46kgf/132N, 15kgf/147.1N, 15.625kgf/153.2N, 20kgf/196.13N, 25kgf/245.16N, 30kgf/294.2N, 31.25kgf/306.45N, 36.51kgf/358N, 50kgf/490N, 60kgf/588.4N, 62.5kgf/612.9N, 98kgf/961N, 100kgf/980.7N, 120kgf/1176N, 125kgf/1225N, 150kgf/1471N, 187.5kgf/1838N, 250kgf/2.45kN
Brinell test range	HB1: 1kgf/9.8N, 2.5kgf/24.5N, 5kgf/49N, 10kgf/98N, 30kgf/294.2N HB2.5: 6.25kgf/61.29N, 15.625kgf/153.2N, 31.25kgf/306.45N, 62.5kgf/612.9N, 187.5kgf/1838N HB5: 25kgf/245.16N, 62.5kgf/612.9N, 125kgf/1225N, 250kgf/2.45kN HB10: 100kgf/980.7N, 250kgf/2.45kN HBT: 5kgf/49N, 250kgf/2.45kN
Vickers test range	HV: 0.5kgf/4.9N, 1kgf/9.8N, 2kgf/19.6N, 3kgf/29.4N, 4kgf/39.2N, 5kgf/49N, 10kgf/98N, 20kgf/196.13N, 30kgf/294.2N, 50kgf/490N, 100kgf/980.7N, 120kgf/1176N HVT: 50kgf/490N, 100kgf/980.7N
Rockwell test scales	A, B, C, D, E, F, G, H, K, L, M, P, R, S, V, Bm, Fm, 15N, 30N, 45N, 15T, 30T, 45T, 15W, 30W, 45W, 15X, 30X, 45X, 15Y, 30Y, 45Y, 30 TM, HMR 5/25
Ball indentation	5kgf/49N, 13.46kgf/132N, 36.51kgf/358N, 98kgf/961N
Indentors (optional)	Brinell Balls: 1mm, 2.5mm, 5mm, 10mm Vickers Diamond: 136° Rockwell Diamond Cone: 120° Rockwell balls: 1/16", 1/8", 1/4", 1/2"
Test cycle	Motorized, automatic
Optical	5 Mega-pixel HD camera, indent zoom function
Display	High resolution embedded industrial LCD touch screen Optional: Desk top LCD screen Optional: Desk top LCD touch screen Optional: Height adjustable LCD touch screen
CPU	Embedded high performance micro PC with 2 HD drives
Firmware	IMPRESSIONS™, advanced hardness testing software including options for: manual measurement, automatic measurement, indent zoom function, scale conversion, file storage, report printing, test program storage, machine settings storage, graphic interface for swivel system position
Standards	Meets or exceeds, ISO, ASTM, JIS (Nadcap) standards
Load duration	1 - 99 seconds
Connectivity	USB-2 (4), UTP RJ45, LAN, W-LAN
Workpiece accommodation	Vertically capacity 320mm, Horizontally capacity 205mm
Specimen access	External surfaces, internal surfaces with goose neck adapter (optional)
Operating temperature	10°C to 35°C, non-condensing
Machine dimensions	300mm x 670mm x 1130mm (WxDxH)
Machine weight	178kg
Power supply	100V AC to 240V AC, 50Hz/60Hz, single phase

Standard delivery

- Flat anvil, $\varnothing 80\text{mm}$
- Clamping device
- 6,3x objective for 95x magnification
- 10x objective for 150x magnification
- Power cable
- Wireless mouse and keyboard
- Four adjustable feet
- INNOVATEST® certificate
- Installation and user manual

Optional accessories

- Certified indentors (ASTM, DIN, ISO)
- Certified reference hardness blocks (ASTM, DIN, ISO)
- Indentor, Vickers, long
- V-anvil, hardened, $\varnothing 80\text{mm}$
- Large testing table, $\varnothing 200\text{mm}$
- 2,85x objective for 43x magnification
- 20x objective for 300x magnification
- Ring light
- Precision vice for small parts, jaw width 36mm
- Precision vice for small parts, jaw width 42mm
- Precision vice for small parts, jaw width 75mm
- V-blocks and special clamps
- Software solutions for advanced applications
- Motorized automatic spindle
- Solid tester table and storage cabinet
- 7500STARTKIT/1:
Testing table, hardened, $\varnothing 180\text{mm}$
set of factory reference hardness test blocks,
set of factory indentors



NEXUS 7501 can be equipped with testing table $\varnothing 200\text{mm}$.



The NEXUS 7501 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.

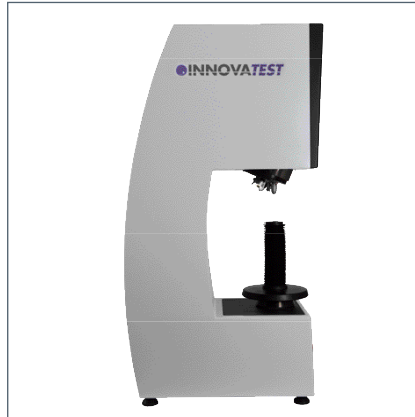
Order details

NEXUS 7501

Universal hardness tester with video indent measuring system, Brinell, Vickers, Rockwell, Superficial Rockwell, Knoop, HVT, HBT, Ball indentation, test forces 0.5kgf/4.9N to 250kgf/2.45kN

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Universal hardness tester



NEXUS 7501 has an advanced report generator allowing you to print sophisticated customized result reports and statistics.



NEXUS 7501 can be equipped with an automatic motorized spindle which makes it possible to position your workpiece without any effort..

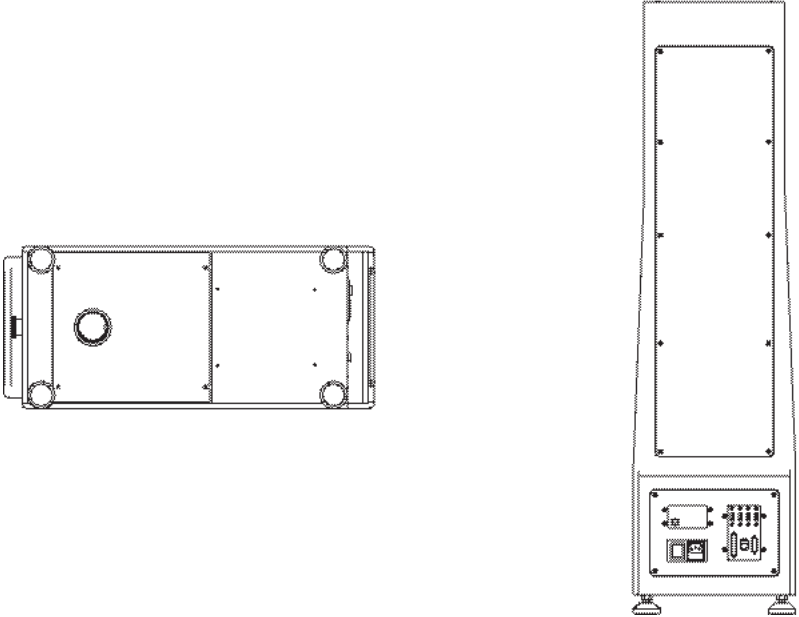
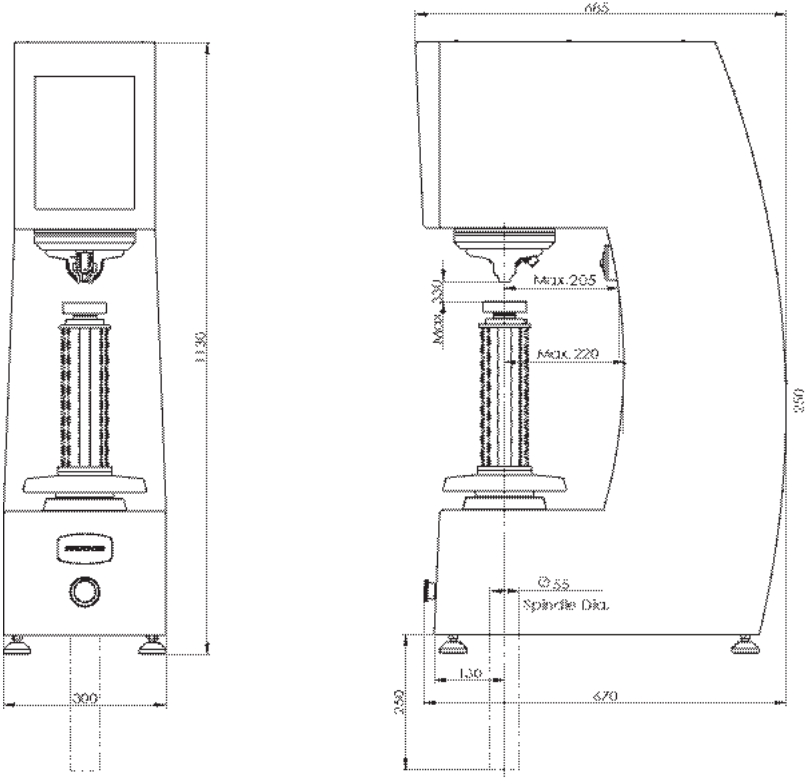


IMPRESSIONS™ hardness testing firmware and video measuring software with enhanced algorithms for automatic indent measuring.



Technical drawing NEXUS 7501

All dimensions are in mm



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