



# COMPUTERIZED BRINELL HARDNESS TESTING MACHINE

*(with inbuilt Industrial PC & Touch Screen facility)*

**Models : OPAB-3000-N-IPC & OPAB-3000-N-IPC (SPL)**



*Mastering the fine art of testing*

## General :

Computerized Brinell Hardness Testers, Models : OPAB-3000-N-IPC & OPAB-3000-N-IPC (SPL) are designed for Brinell hardness measurement on steels and other ferrous materials and also on non-ferrous materials like Brass, Bronze, Aluminium, etc. The material can be cast, forged or rolled and the shape can be flat, round or irregular shapes.

## Features :

- The actual load application system is of dead weight type combined with mechanical lever system. The supporting hydraulic system is for initial lifting of load before each test and dampening the load application system for smooth application of load.
- A separate hydraulic power pack, positioned in the bottom part of the machine adds to the machine stability.
- Our unique design of a floating fulcrum lever system ensures high accuracy and dependability.
- An automatic indenter index system is provided which tilts the indenter after the impression and the magnified image is visible on the IPC for measurement.
- Thus this machine saves a lot of cycle time, improves accuracy of measurement & gives fast & accurate results with less operator fatigue.
- This model is mainly useful for production testing in Auto shops, Foundries, Forging Shops and Heat treatment units, etc.
- The machine accuracies confirm to IS: 2281-2005 & BS : 240.

## Special Additional Features :

- Machine is fully computerized system for indentation measurement and display.
- The image is scanned for measurement and hardness is displayed automatically.
- Accurate measurement of Brinell hardness through matched optics, CCD Camera with box image magnification, hardware and software using advanced image processing technology.
- It gives an image of indentation directly on inbuilt Industrial PC of the machine with measurement facility and touch screen.
- Fine adjustment facility is provided for accurate measurement of the image.
- Auto, semi-auto and manual test facility.
- Quick compare mode for Go: No-Go application.
- Coarse and Fine position adjustment for manual test.
- Calibration modes - Camera, Axial & Radial Calibration (5 Point calibration).
- Batch testing facility.
- Roll based access to features.
- Statistical analysis.
- Certificate generation.
- Search based on various parameters.
- Test report, certificate printing facility.
- Software compatibility with Windows XP-SP2, Vista, Win-7 OS.

## Industrial Panel PC Specifications :

- Fanless Panel PC with 4:3 LED touch screen panel and industrial motherboard specially designed for industrial applications.
- Intel Atom Processor 1.6 GHZ, 1GB DDR2 RAM.
- 8.0" LCD monitor having resolution 800 x 600 (SVGA).

## Software Features (BrinSoft) :

This is precise Brinell Impression Measurement Software. High technology image management system is built to get desired accuracy with IS compliance to be measured within given time. The detailed features are as listed below:

### Precise Brinell Impression Measurement :

Based on Image Processing techniques, BrinSoft achieves high precision in measurement and also the repeatability in the readings. It is easily configurable for environment. Working with USB camera enables BrinSoft to be deployable at difficult measuring conditions along with standard BIMS applications.

### Measurement Modes :

There is a fast and accurate Auto mode for standard components with good surface finish. Additionally, a Semi-Auto mode is provided for measuring blurred images due to poor surface finish. In case of very fast measurement requirements where the actual hardness value is not required, a confirmation that it is within specified limits is enough, compare mode is also provided. With such variety of modes, most of the test conditions are covered enabling the user to obtain results in required methodology and in required formats.

### Calibration facility :

Calibration is the heart of every measurement. So, BrinSoft provides multiple calibration levels to achieve high accuracy in results. There is Pixel calibration accompanied with multi-point calibration and ERMA / Slip gauge calibration. With these calibration techniques, BrinSoft provides precise measurement results.

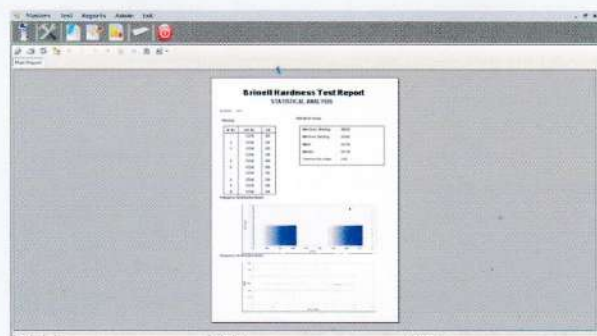
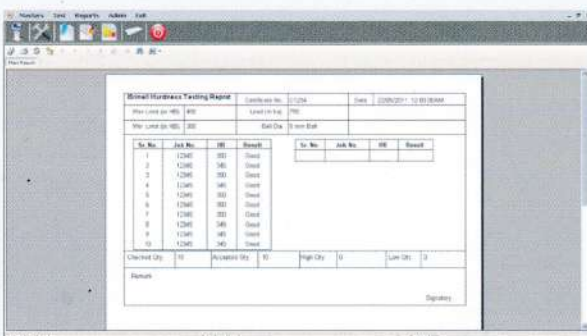
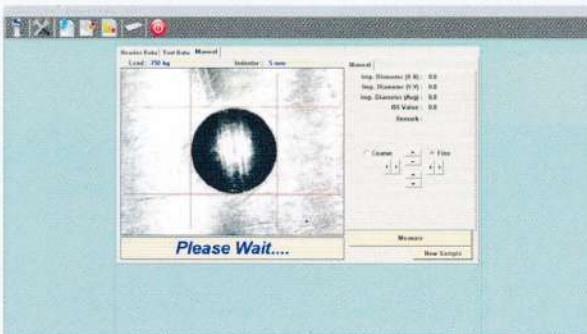
### Analysis and Reporting :

If one cannot find the historical data, it is as good as being unavailable. So, Search is key feature of BrinSoft. Test Certificate and Customer are key search criteria along with other details. Uniqueness of the Test Certificates being generated is maintained and the same is available for searching and printing. Additionally, there is statistical analysis available in tabular and graphical formats to assist the testing personal.

### Hardware Interface :

The key input to BrinSoft is the image captured by the CCD camera. So, presently it is configured to work with special purpose USB camera for this application. However, it can be easily configured to work with any other camera considering the image quality.

## Software Screen Shots (BrinSoft) :



## Technical Specifications :

Models	OPAB-3000-N-IPC	OPAB-3000-N-IPC (SPL)
Loads (kgf)	500 to 3000 in steps of 250	187.5,250, 500 to 3000 in steps of 250
Initial load (kgf)	NIL	NIL
Maximum test Height x Throat (mm)	380 x 200	380 x 200
Maximum depth of elevating screw below base (mm)	180	180
Machine height (mm) approx.	1250	1250
Size of base of machine (mm) approx.	400 x 740	400 x 740
Net weight of machine (kg) approx.	400	425
Drive motor (hp)	0.5	0.5
Mains supply	3 Phase, 415V, 50 Hz, AC	3 Phase, 415V, 50 Hz, AC
Indentation Measurement	Direct reading through CCD Camera on inbuilt Industrial PC.	Direct reading through CCD Camera on inbuilt Industrial PC.
Scales Provided in software (Ball dia. in mm / Load in kgf)	5/750, 10/500, 10/1000 & 10/3000	2.5/187.5, 5/250, 5/750, 10/500, 10/1000 & 10/3000.

## Standard Accessories :

Models	OPAB-3000-N-IPC	OPAB-3000-N-IPC (SPL)
Flat testing table dia 200 mm	1 No	1 No
"V" Groove testing table dia 70 mm for round jobs of dia 10 to 80 mm	1 No	1 No
Ball holder with TC ball of dia 2.5 mm	-	1 No
Ball holder with TC ball of dia 5 mm	1 No	1 No
Ball holder with TC ball of dia 10 mm	1 No	1 No
Std. Test Block HBW – 2.5/187.5 (with Manufacturers Certificate)	-	1 No
Std. Test Block HBW – 5/250 (with Manufacturers Certificate)	-	1 No
Std. Test Block HBW – 5/750 (with Manufacturers Certificate)	1 No	1 No
Std. Test Block HBW – 10/3000 (with Manufacturers Certificate)	1 No	1 No
Industrial PC	1 No	1 No
Allen key set	4 - Pcs.	4 - Pcs.
Instruction manual	1 Book	1 Book

## Optional Accessories :

Test Blocks of desired hardness range. (NABL Certificate for any Std. Test Block will cost extra).
Special Test fixtures for odd jobs / Production testing.
Portable Computerized Brinell Impression Measuring System (BIMS system).
Printer & Printer interface suitable to machine.

We can also supply – Universal Testing Machines, Compression Testing Machines, Tensile Testing Machines, Chain and Rope Testing Machines, Spring Testing Machines, Vickers / Brinell / Rockwell Hardness Testing Machines, Dynamic Balancing Machines, Dynamic Hardness Testers, Impact Testing Machines, Torsion & Fatigue Testing Machines & Special purpose Material Testing Machines, etc.

**Sold & Serviced By:**



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