

FOUNDRAx

The BRINtronic range of automatic Brinell microscopes



Foundrax Engineering Products Ltd

Foundrax.co.uk

No compromise performance in a compact, ultra accurate and robust automatic Brinell microscope

Foundrax invented automatic Brinell indentation measurement in the early 1980s. The system, which revolutionised the Brinell test—with benefits across multiple industrial sectors—has been enhanced repeatedly since its launch and continues to exceed the requirements of the international Standards.

In the 1990s we launched the BRINtronic range, which made automatic measurement available in a hand-portable rugged unit. The range now comprises four models; the LT, the PC, the MD2 and the latest model, the **NEO**, an ultra compact, super-lightweight model.

No adjustment so no risk of error and no frequent reverification

The BRINtronic gives a level of accuracy, reliability and repeatability of results that is the industry benchmark and requires only annual reverification. Removing any need for the operator to make adjustments to the type of illumination (for example switching between ring light illumination and overhead lighting) eliminates the risk of incorrect measurements due to setup error and thus the requirement for frequent reverification in order to meet the Standards.



The BRINtronic will do all this without any adjustments to lighting or changes of lens

The software features numerous traps and self-checks in order to ensure that the measurements it uses to define the indentation are validated in a number of independent ways. The principle behind the design is that the system gives you the right answer or no answer and that, in the very rare event of doubt, the answer is either withheld or the operator is clearly warned (for example if the measurement is attempted on an unprepared surface) and even then the result should only vary by one or two points from the optimum. The BRINtronic optically measures the indentation under the toughest industrial conditions and the user-friendly software gives the operator warnings if any parameters are in doubt.





BRINtronic-NEO

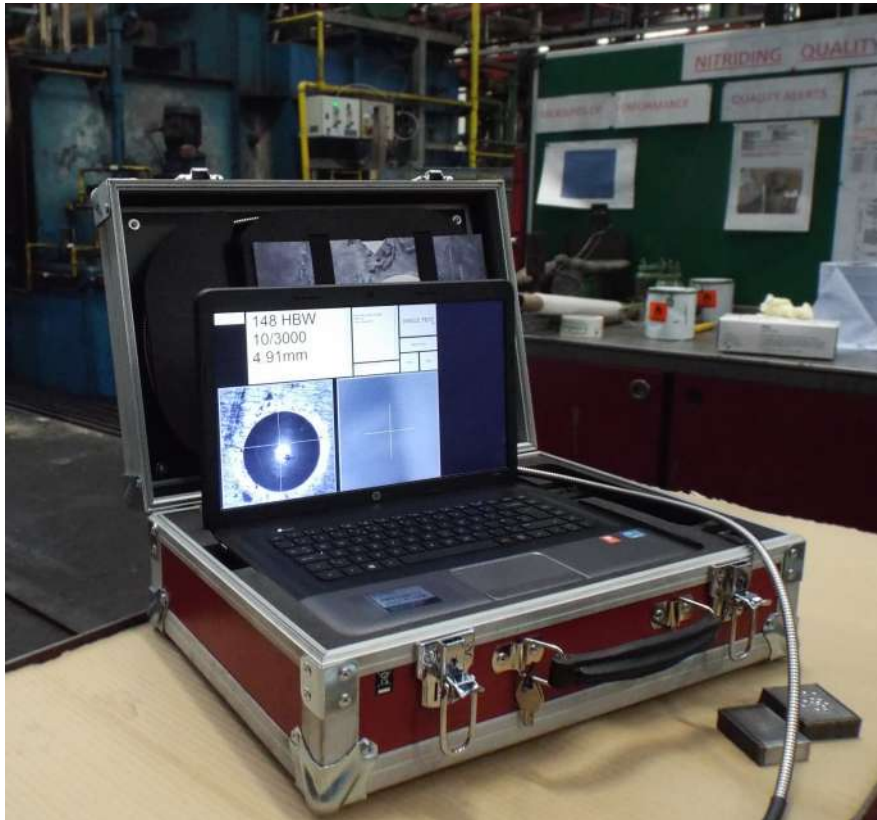
The BRINtronic system

On the shop floor or in the laboratory, the measurement of the indentation is the key to reliable results. Over 40 years of experience of automatic measurement has refined an algorithm that makes hundreds of accurate indentation diameter measurements every time on surfaces with only minimal preparation. Quicker surface preparation means lower costs and higher productivity.

The BRINtronic system features a simple, intuitive, icon-driven interface and is quick to move between test screens, batches and alternative test parameters. It will automatically evaluate the quality of the surface preparation and warn the user if it is not good enough (although this is very unusual). It can summarise the batch reports with or without individual test results, including displaying the batch size, batch mean, standard deviation and the number of high and low rejects. The system is fully networkable and can communicate with a remote computer and upload / download batch data.

The BRINtronic demonstrably finds the indentation more effectively and the edge more reliably than any other automatic Brinell microscope. It recognises and ignores noise from grinding marks across all normal industrial test surfaces so you don't need to worry about alignment of the grinding marks for reliable results. As it can measure on all normal surfaces, standard reference blocks are all that is needed and the surface preparation required on test materials takes about five seconds of work with a hand grinder.

Comprehensive software traps protect you from false results. The BRINtronic will warn the operator if there is an issue and will refuse to publish a result on those exceptionally rare occasions where there is significant doubt – ensuring *all* measurements you record are reliable and providing unparalleled confidence to both you and your customers.



BRINtronic-LT in use at a UK heat treatment plant

The new BRINtronic microscope

Launched in 2023, the new microscope has a flatter, brighter light with enhanced diffusion for superior illumination and an even higher degree of accuracy than the previous model (which was already the industry benchmark). The field of view is larger than any Brinell indentation, with a 26% increase in pixels, for optimum resolution, and power consumption has been halved. As every Foundrax customer would expect, the very tough body has all the ruggedness a steelworks environment demands, and the new ergonomic shape and mass have been chosen to ensure the unit is balanced and comfortably 'secure' in the hand. It all adds up to a significantly enhanced user experience.



The advantages and benefits of the BRINtronic system

- Very low uncertainty of measurement gives reliable, accurate, repeatable results
- Works as well on rough surfaces as on mirror finishes
- Operator-independent results, whoever is operating, and no operator adjustments required
- Quick changeover between batches and parameters
- Surface preparation evaluation and warning (if required)
- Ovality detection in accordance with user-defined parameters
- Displays results in HBW and mm instantly
- Provides results to 2 decimal places (HBW) and two or four decimal places (mm) as well as batch mean, standard deviation
- Offers batch summary reports (batch size, batch mean, standard deviation, number of high and low rejects) with or without individual test results
- Multi-language user interface
- Single tests or batch testing
- Uses up to 600 diameters to calculate the mean — even in the worst cases it will still use approximately 50.
- Will refuse to give an answer if insufficient diameters can be measured
- Detects and highlights ovality as required by ASTM E10-18
- Measures indentations from 0.6mm to 6mm
- Software traps prevent incorrect results—an accurate result or no result
- Allows results to be uploaded live to network and batch set up for remote selection
- Offers customised batch parameters and reports
- Easily integrated into production quality control systems
- Measures indentations made on all materials to which the standards are relevant
- Simple icon-driven software
- Tailored support—special requirements are easily catered for
- UKAS certified to ISO 6506-2: 2018 and ASTM E10-18



At a glance—the BRINtronic range

All models in the BRINtronic series make authentic optical measurements, processed with the latest version of the ground-breaking software which began the Brinell measurement revolution in the early 1980s. This system remains unsurpassed.

The BRINtronic-MD2

Fully automatic Brinell microscope for use with customer's own PC or laptop (also available as the MDb

The BRINtronic-LT

Fully automatic portable Brinell microscope includes Laptop PC supplied in a tough industrial case.

The BRINtronic-PC

Fully automatic desktop Brinell microscope available with a range of accessories including IP65 ruggedised industrial cabinet and IP65 industrial membrane keyboard.

The BRINtronic-NEO

New for 2021, the NEO offers all the functionality of the LT but has been completely re-engineered from the ground up and is 7 kilograms lighter! However, the NEO does not run on Windows-based software so may not suit some customers who need this.

Foundrax hardness calibration blocks

All supplied with UKAS certificates of calibration

Foundrax has been making hardness reference blocks for longer than any other UK manufacturer. We offer a wide range of Brinell and Rockwell blocks and were the first to achieve UKAS accreditation for Brinell blocks.

We continue to invest in our block production capabilities and remain at the forefront for quality and value.



Blocks exceed the requirements of BS EN ISO 6506 / ISO 6508 and ASTM E10 / E18-20 as appropriate.

- Brinell blocks feature mirror finish for easy indentation.
- Rockwell blocks are available in standard and premium ranges.
- Custom grid, standard grid or no grid options.
- Extremely accurate manufacturing capability gives high confidence in results.

Contact Us



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Foundrax was established in 1948 and is the only company in the world to truly specialise in Brinell hardness testing equipment and accessories. We invented commercial automatic Brinell measurement and were the first company to be officially recognised for the manufacture of Brinell Reference Blocks in the UK. We have manufactured several National Standard Calibration machines and production machines which have performed tens of millions of tests (over 30 million in one case). Our equipment is used in 46 countries around the world and 94% of our customers say they would recommend us.

The Foundrax range includes everything from reference blocks, portable Brinell hardness testers and National Hardness Standard Calibration Machines through to heavy duty, fully automatic production machines which operate 24/7.

Not only is our equipment used in several National Metrological Institutes providing National hardness standards, but it is also found in steelworks, foundries, forges and heat treatment plants around the world and in many other industries besides.



UKAS accredited



Supporting the Brinell test globally for nearly 70 years



Innovators and specialists



Custom designed machinery

Field-proven durability

Laboratory precision under
steelworks conditions

