Brinell Hardness Reference Blocks

Supplied With UKAS Certificates Of Calibration

RUGGED PRECISION
Laboratory accuracy under steelworks conditions
Foundrax have the best accredited Calibration and Measurement Capabilities (CMCs) of any British Brinell calibration laboratory and our CMCs for the commercial manufacture of Brinell Reference Blocks are amongst the best in the world.

This means that you and your customers have more confidence in your results when using equipment checked on our Brinell Reference Blocks, not only improving your own quality but giving you a further advantage over competitors who use inferior blocks.

Calibration of our reference blocks, Brinell hardness testers and microscopes are traceable to PTB (Physikalisch-Technische Bundesanstalt) in Germany and official UKAS certificates of calibration are supplied with each one.

Our Brinell Reference Blocks conform fully to ISO 6506-3:2014 and ASTM E10-15 and are complete with reference indentation as per ISO 6506-3 8.3.

All blocks feature mirror finishes for clear and easy indentation measurement.
### Available hardness Ranges and Scales Shown Below

<table>
<thead>
<tr>
<th>SCALE</th>
<th>F/D² RATIO</th>
<th>AVAILABLE HARDNESS RANGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBW10/3000</td>
<td>30</td>
<td>140-169 170-199 200-229 230-269 270-299 300-329</td>
</tr>
<tr>
<td>HBW5/750</td>
<td></td>
<td>330-369 370-399 400-499 500-600</td>
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<tr>
<td>HBW2.5/187.5</td>
<td></td>
<td></td>
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<tr>
<td>HBW10/1500</td>
<td>15</td>
<td>60-89A 90-190A 110-150A 140-169 170-199 200-229</td>
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<tr>
<td></td>
<td></td>
<td>230-269 270-299</td>
</tr>
<tr>
<td>HBW10/1000</td>
<td>10</td>
<td>60-89A 90-109A 110-150A 140-169</td>
</tr>
<tr>
<td>HBW5/250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HBW10/500</td>
<td>5</td>
<td>60-89A 90-100A</td>
</tr>
</tbody>
</table>

**Notes:**
- All blocks certified to ISO 6506-3 and ASTM E10.
- All blocks supplied with official UKAS certificate of calibration unless requested otherwise.
- All blocks offer 173cm² surface area.
- All blocks in steel except where marked A (aluminium).
- Standard hardness ranges are marked in bold; ranges in grey are not available at present.
- Please advise hardness range & hardness scale required on your order.

**Advantages of Foundrax UKAS certified hardness reference blocks:**
- Mirror finish for clear and easy indentation measurement.
- Standard grid, custom grid and “no grid” options.
- Your own grid at no extra charge.
- Very low uncertainty of measurement gives high confidence in results.
- Quick delivery.
- Competitive discount structure.
Brinell Reference Indentation Reading Blocks

The challenge in Brinell hardness testing is not in making the indentation but in the measurement of the indentation, when using a manual microscope defining the edge depends on a subjective judgement of the operator and different operators may get different answers.

Foundrax Reference Indentation Reading Blocks feature 10 standardised authentic indentations of differing sizes made and measured using our Master Calibration Machine (traceable to PTB) so are correct by definition. These are supplied in protective boxes with official UKAS certificates of calibration and represent the standard of measurement to which operators should aspire.

Using Foundrax Brinell Reference Indentation Reading Blocks

By measuring each indentation it is possible to determine what systematic error each operator has, and if necessary to train them to measure correctly and to tighter limits than they have been used to. The mean diameters of the Reference Indentations are given on the Certificate and not on the Block so it can then be seen whether their measurements are correct, consistent or inconsistent etc.

When disputes over Brinell hardness arise it is possible to find which party is making the truer measurements.

Foundrax Brinell Reference Indentation Reading Blocks may be also be used for the Indirect Verification of manual Brinell microscopes to ISO 6506 and ASTM E10.

Our Standardized Brinell indentations:

- Make the Brinell test more meaningful and accurate.
- Can be used to train operators to measure Brinell indentations correctly.
- Enable the monitoring of operators.
- Resolve arguments.
- Discover an operator’s systematic reading errors.
- Can be used to Indirectly Verify manual Brinell microscopes.

These are steel blocks containing 5 Reference Indentations made with a 10mm ball in the range 2.40-6.00mm and 5 Reference Indentions made with a 5mm ball in the range 1.20-3.00mm. These measuring ranges cover all Brinell scales using 10mm and 5mm Brinell balls.
Service

Delivery is normally 2-3 weeks. However, if you need the blocks more quickly we will do all we can to assist, potentially we can bring it down to under a week depending on our current stock.

We also offer a discount structure based on an annual or quarterly “call off” contract.

We can provide you blocks with your own custom grids at no extra charge if our standard grids are not suitable for your purposes.

In a recent customer survey:

94% of respondents stated that they classed our products as good or excellent.

94% of respondents stated that they considered our customer service good or excellent.

PTB - The National Metrology Institute of Germany

The Physikalisch-Technische Bundesanstalt is amongst the most respected organisations in metrology worldwide.

As Germany’s national metrology institute, PTB is Germany’s highest authority when it comes to reliable hardness measurement.

Their Calibration and measurement capabilities are amongst the very best in the world, and through our traceability to them, Foundrax are able to offer Industry leading Uncertainty of Measurement and have correspondingly excellent Calibration and Measurement capability.
The quality of the Foundrax Range is recognised by:

BMW • Volkswagen • Rolls Royce • Nissan • Boeing • Airbus • ABB • Tata Steel • Swedish Steel • Bohler Steel

Thyssen Krupp • GE • FMC • NOV • Cameron • Lucchini RS • Kamaz • Caterpillar

and many more...and many more...

ISO 6506 and ASTM E10 accredited
Over 50 years of worldwide testing
Custom designed machinery
How do you measure your indentations?

Have you considered the huge advantages of automatic measurement over manual measurement? If not please have a look at the Foundrax BRINtronic series of automatic Brinell microscopes at www.foundrax.co.uk/brintronic-microscopes or contact us for more details.
Foundrax were established in 1948 and are 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 many other industries besides.

**UKAS accredited**

**Supporting the Brinell test worldwide for nearly 70 years**

**Innovators and specialists**

**Custom designed machinery**

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**RUGGED PRECISION**

Laboratory accuracy under steelworks conditions