

FOUNDRA X

Brinell and Rockwell Hardness Reference Blocks

Supplied with UKAS certificates of calibration



Brinell Reference Blocks

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 blocks with a greater uncertainty of measurement.

The calibration of our reference blocks, Brinell hardness testers and microscopes is 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 E10-18 and are complete with reference indentations as per ISO 6506-3 8.3.

SCALE	F/D ² RATIO	AVAILABLE HARDNESS RANGES—Marked in bold print
HBW10/3000 HBW5/750 HBW2.5/187.5	30	140-169 , 170-199, 200-229 , 230-269 , 270-299, 300-329 , 330-369 , 370-399, 400-499 , 500-600
HBW10/1500	15	59-99A , 100-109A , 110-139A, 140-169 , 170-199, 200-229 , 230-269 , 270-299
HBW10/1000 HBW5/250	10	55-89A , 90-109A , 110-140A, 140-169
HBW10/500	5	55-89A , 90-100A

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 and 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.

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, determining where the edge is depends on a subjective judgement by the operator and different operators may get different answers.

Foundrax Reference Indentation Reading Blocks feature ten standardised 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

Through the process of an operator measuring each indentation it is possible to determine whether the operator has a systematic reading deficiency and, if so, what additional training may be required. Such training can enable operators to measure within significantly tighter margins. The mean diameters of the Reference Indentations are given on the Certificate and not on the Block, lessening the possibility of operators ‘cheating’. Furthermore, 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 operator accuracy.

Resolve arguments.

Can be used to Indirectly Verify manual Brinell microscopes.

These are steel blocks containing five Reference Indentations made with a 10mm ball in the range 2.40-6.00mm and five Reference Indentations 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 can provide you blocks with your own custom grids at no extra charge if our standard grids are not suitable for your purposes.

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 is able to offer Industry-leading Uncertainty of Measurement and has correspondingly excellent Calibration and Measurement capability.



Rockwell Reference Blocks

Calibration of our Rockwell reference blocks is also traceable to PTB (Physikalisch-Technische Bundesanstalt) in Germany and official UKAS certificates of calibration are supplied with each one. Our Rockwell Reference Blocks conform fully to ISO 6508-3:2015 and ASTM E18-20.

Our steel blocks are 65mm x 65mm x 14mm. Brass are either 65mm x 65mm x 14mm or 50mm x 50mm x 6mm (depending upon the requested hardness).

65x65x15 blocks are available with a fine, surface-ground finish or a premium mirror finish (50x50x6 blocks are all premium mirror finish).

SCALE	APPROXIMATE AVAILABLE HARDNESS VALUES—PLEASE NOTE THAT THE ACTUAL BLOCK SUPPLIED WILL BE WITHIN +/- 3 HARDNESS POINTS OF THAT WHICH IS ORDERED
HRA	22.5, 24.2, 25, 29, 30.8, 33, 35, 37, 40, 41, 45.5, 49.5, 53, 56, 60.5, 61.5, 62.8, 65.3, 67.9, 70.4, 73.1, 75.9, 78.5, 81.2, 82.8
HRBW	21, 25, 27, 36, 40, 45, 50, 54, 61, 63, 73, 80, 86, 91, 99
HRC	20, 25, 30, 35, 40, 45, 50, 55, 60, 63
HRD	40.1, 43.8, 47.7, 51.5, 55.4, 59.2, 63.1, 66.9, 70.7, 73
HREW	69.5, 72, 73, 78.5, 81, 84, 87, 89.5, 93.5, 95
HRFW	69, 71, 72.5, 77.5, 79.5, 82.5, 85.5, 87.5, 91.5, 93, 98.5
Other available scales	HRG, HRH, HRK, HRL, HRM, HRP, HRR, HRS, HRV

Notes:

All blocks certified to ISO 6508-3 and ASTM E18

All blocks supplied with official UKAS certificate of calibration unless requested otherwise.

Blocks are steel or brass.

Please advise hardness range and hardness scale required on your order.

Advantages of Foundrax UKAS certified hardness reference blocks:

Standard grid, custom grid and “no grid” options - custom grids are available at no extra charge

Very low uncertainty of measurement 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 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

