

DAVID L. ELLIS COMPANY, INC.

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Certificate No.
080

Certificate of Calibration and Conformance For Brinell Test Block

SAMPLE ONLY

Hardness HBW	180	Operator	LSE
Serial Number	080	Method ASTM	E10-07a
Force KGF	500	Date Calibration	06/05/08
Force in kN	4.9	Tol. +/- HBW	5
Ball diameter mm	10	Code	P
Data	mm	Uncertainty	HBW
Reading 1 REF	1.861	Unc Std Machine(1)	2.6
Reading 2	1.872	Unc Test Block (2)	3.0
Reading 3	1.873	Range for Tester Verification	
Reading 4	1.865	Low	High
Reading 5	1.880	175	186
Average	1.870	Temp deg C	23
High	1.880	Humidity %	40
Low	1.861	Notes	1.02
Repeatabilty	0.019	(1) Uncertainty of standardizing tester	
STD DEV	0.007	(2) Uncertainty of testblock. Use this value during indirect verification. (K=2)	

180	HBW	10 500	1.870 mm
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The above calibration was verified with the following equipment, which is traceable to NIST,NPL or PTB.

United Load Cell
Serial No.:TVI 103144

Stage Micrometer #0024 in 0-7 mm
N.I.S.T. Test No. 821/264390-00

United STM-HB-2000A, TB II
Serial Number 0105510, 201156

Thompson Precision Ball, 1,2,5,5,10mm

The standardized test blocks are calibrated in accordance with ASTM E10 using indenter/loads combinations traceable to Ellis hardness levels through laboratory standardizing machines. The standardizing machines are directly verified according to ASTM E10 using devices that are traceable to NIST either directly or through an A2LA or NVLAP approved laboratory.

Expanded uncertainty uses coverage factor K=2, providing a confidence level of approximately 95%.

This test report is not to be used to claim product endorsement by the David L. Ellis Company Inc., A2LA, NVLAP or any government agency.

This block is calibrated according to A.S.T.M. E10 standards, ANSI (NCSL) Z540-1, (ISO) 10012, and ISO/IEC Guide 17025 by David L Ellis Co., Inc. A2LA certificate number 1310.01 Calibration and NVLAP Calibration 100127-0.

Representative

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Accredited 1310.01
Calibration



Lab Code:200127-0
Calibration Laboratories