



THE AMERICAN ASSOCIATION FOR
LABORATORY ACCREDITATION

ACCREDITED LABORATORY

A2LA has accredited

JLW INSTRUMENTS, INC./METROLOGY CONCEPTS **Chicago, IL**

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and any additional program requirements in the field of calibration. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 18 June 2005*).

Presented this 16th day of January 2008.

A handwritten signature in cursive script, reading "Peter Abney", positioned above a horizontal line.

President
For the Accreditation Council
Certificate Number 1753.01
Valid to May 31, 2009



For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005
& ANSI/NCSL Z540-1-1994

JLW INSTRUMENTS, INC / METROLOGY CONCEPTS
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CALIBRATION

Valid To: May 31, 2009

Certificate Number: 1753.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations¹:

I. Mechanical

Parameter/Equipment	Range	Best Uncertainty ² (±)	Comments
Force – Measuring Equipment			
Transducers, Load Cells, Transducers, Dynamometers	(0 to 100) lbf (100 to 1000) lbf (1000 to 10 000) lbf	0.12 lbf 1.4 lbf 1.6 lbf	Dead weights Dead weights Dillon force machine
Medical Hydraulic Grip, Pinch Gauges	(0 to 200) lbf (0 to 50) lbf	3.2 lbf 0.48 lbf	Load cell with indicator Force gauge
Mass	(0 to 100) g (100 to 300) g (300 to 1200) g (1200 to 10 000) g (10 000 to 30 000) g	0.0053 mg 0.049 mg 0.3 mg 3.6 mg 8.2 mg	Single pan substitution

Parameter/Equipment	Range	Best Uncertainty ^{2,3} (\pm)	Comments
Pressure – Measuring Equipment			
Gauges, Transducers Pneumatic	(1 to 100) psig	0.6R	Deadweight tester
Water	(10 to 15 000) psig	0.6R	
Oil	(10 to 15 000) psig	0.6R	
Pressure – Generating Equipment			
Hydraulic Deadweight Testers	(0 to 15 000) psig	95 parts in 10 ⁶	Deadweight tester (cross-floating)
Pneumatic Deadweight Testers	(0 to 30) psig (0 to 1600) psig	80 parts in 10 ⁶ 96 parts in 10 ⁶	
Vacuum Gauges	(0 to 29) inHg	0.086 inHg	Pressure calibrator
Torque – Measuring Equipment			
Torque Testers, Transducers	(0 to 120) lbf·in (10 to 200) lbf·ft (200 to 2000) lbf·ft	0.01 lbf·in 0.01 lbf·ft 0.01 lbf·ft	Class F weights with torque arm
Torque – Generating Equipment			
Torque Watches	(0.5 to 2.5) oz·in (2.5 to 10) oz·in (10 to 43) oz·in (43 to 215) oz·in	0.03 oz·in 0.1 oz·in 0.6 oz·in 3.0 oz·in	Class 6 weights with Analog transfer standard
Torque Screwdrivers, Wrenches, Multipliers	(0 to 100) lbf·ft (100 to 2000) lbf·ft	0.2 % of reading 0.4 % of reading	Torque transducer with digital readout

¹ This laboratory offers commercial calibration service.

² “Best Uncertainty” is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards of nearly ideal measuring equipment. Best uncertainties represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The best uncertainty of a specific calibration performed by the laboratory may be greater than the best uncertainty due to the behavior of the customer’s device, to the environment (if the calibration is performed in the field) and to influences from the circumstances of the specific calibration.

³ R is the resolution of the unit under test.