



The American Association for Laboratory Accreditation

World Class Accreditation

Accredited Laboratory

A2LA has accredited

J.A. KING & COMPANY, LLC

Chattanooga, TN

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 8 January 2009).

Presented this 3rd day of April 2009.





Peter Meyer

President & CEO
For the Accreditation Council
Certificate Number 1741.06
Valid to May 31, 2011
Revised: January 21, 2010

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

J. A. KING & COMPANY, LLC
 6125-C Heritage Park Drive
 Chattanooga, TN 37416
 Connie Foster Phone: 800 327 7727

CALIBRATION

Valid To: May 31, 2011

Certificate Number: 1741.06

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

I. Dimensional

Parameter/Equipment	Range	CMC ^{2,4} (±)	Comments
Calipers ³	Up to 12 in	$(1.6 + 17L + 0.6R) \mu\text{in}$	Gage blocks
Hand Tools – Micrometers, Linear Dial and Test Indicators ³	Up to 2 in	$(35 + 9L + 0.6R) \mu\text{in}$	Gage blocks

II. Mechanical

Parameter/Equipment	Range	CMC ^{2,4,5} (±)	Comments
Torque Testers ³	Up to 250 ft·lb	0.095 %	Class F weights & torque arms

Parameter/Equipment	Range	CMC ^{2, 4, 5} (\pm)	Comments
Scales & Balances ³	(1 to 20) g (20 to 50) g (50 to 100) g (100 to 200) g (200 to 300) g (300 to 500) g (500 to 1000) g	(0.088 + 0.6R) mg (0.14 + 0.6R) mg (0.3 + 0.6R) mg (0.6 + 0.6R) mg (0.9 + 0.6R) mg (1.4 + 0.6R) mg (3.0 + 0.6R) mg	ASTM Class 1 weights
	To 5000 g To 10 000 g To 20 000 g	(600 + 0.6R) mg (1.7 + 0.6R) g (3.4 + 0.6R) g	Class F weights
	To 10 lb To 20 lb To 50 lb To 100 lb To 500 lb To 1000 lb (1000 to 120 000) lb	(0.002 + 0.6R) lb (0.003 + 0.6R) lb (0.008 + 0.6R) lb (0.017 + 0.6R) lb (0.085 + 0.6R) lb (0.17 + 0.6R) lb 0.17 per 1000 lb + 0.6R	Class F weights
Force – Tension only ³	Up to 10 lbf Up to 20 lbf Up to 50 lbf Up to 100 lbf Up to 500 lbf Up to 1000 lbf Up to 2000 lbf	(0.002 + 0.6R) lbf (0.003 + 0.6R) lbf (0.008 + 0.6R) lbf (0.017 + 0.6R) lbf (0.085 + 0.6R) lbf (0.17 + 0.6R) lbf (0.34 + 0.6R) lbf	Class F weights
Torque Wrenches ³	4 in·lb to 250 ft·lb	0.8 %	CDI Suretest 5000-ST
Pressure ³	(10 to 10 000) psi	0.13 %	Ametek dead weight tester

¹ This laboratory offers commercial and field calibration service.

² Calibration and Measurement Capability (CMC) 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 or nearly ideal measuring equipment. Calibration and Measurement Capabilities represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

³ Field calibration service is available for this calibration and this laboratory meets A2LA R104 – *General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.

⁴ L represents the length of the unit under test in inches. R is the resolution of the unit under test.

⁵ Unless otherwise noted, percentage refers to percent of reading.