



World Class Accreditation

The American Association for Laboratory Accreditation

Accredited Laboratory

A2LA has accredited

DENTON ATD, INC.

Rochester Hills, MI

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 20th day of January 2010.





Peter Abney

President & CEO
For the Accreditation Council
Certificate Number 1644.01
Valid to December 31, 2011

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

DENTON ATD, INC.
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 Rochester Hills, MI 48309
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CALIBRATION

Valid To: December 31, 2011

Certificate Number: 1644.01

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	CMC ² (±)	Comments
Force – Load Cells	4 ozf to 400 lbf (50 to 500) lbf (100 to 1000) lbf (200 to 2000) lbf (500 to 5000) lbf (1000 to 10 000) lbf(2500 to 25 000) lbf (5000 to 50 000) lbf (8000 to 80 000) lbf	0.08 % FS 0.08 % FS 0.12 % FS 0.08 % FS 0.08 % FS 0.08 % FS 0.08 % FS 0.11 % FS 0.10 % FS	Class F weights Axial load using load cells
Moment – Load Cells	(50 to 500) in·lbf (100 to 1000) in·lbf (200 to 2000) in·lbf (500 to 5000) in·lbf (5000 to 25 000) in·lbf (25 000 to 60 000) in·lbf	0.23 % FS 0.10 % FS 0.16 % FS 0.20 % FS 0.20 % FS 0.24 % FS	Moment load with load cells

Parameter/Range	Frequency	CMC ² (±)	Comments
Acceleration Sensitivity/Frequency Response – (0.25 to 10) g	(25 to <100) Hz	1.7 % FS	Comparison using acoustic power system and 2270M8 or 2270M7A accelerometers
10 g	(100 to 2500) Hz (>2500 to 10 000) Hz (>10 000 to 20 000) Hz	1.4 % FS 2.7 % FS 5.7 % FS	Comparison system using Bouche shaker and 2270M8 or 2270M7A accelerometers
Acceleration – Resonance Search 10 g	(20 000 to 50 000) Hz	1.3 dB	Comparison system using Bouche shaker to 2270M7A (undamped 80 kHz single degree of freedom response)

¹ This laboratory offers commercial calibration services.

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.