



THE AMERICAN ASSOCIATION FOR
LABORATORY ACCREDITATION

ACCREDITED LABORATORY

A2LA has accredited

LDS VACUUM PRODUCTS **Longwood, FL**

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 25th day of September 2007.

A handwritten signature in cursive script, appearing to read "Peter Meyer", written over a horizontal line.

President
For the Accreditation Council
Certificate Number: 1566.01
Valid to: August 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

LDS VACUUM PRODUCTS
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Longwood, FL 32750
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CALIBRATION

Valid To: August 31, 2009

Certificate Number: 1566.01

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

I. Mechanical Quantities (Leak Standards and Vacuum Gages)

Parameter	Range	Best Uncertainty ² (±)	Comments
Leak Rate ³ – Helium Gas Leak Standards	$(1 \times 10^{-10} \text{ to } 9 \times 10^{-2}) \text{ scm}^3/\text{s}$	2.7 % of reading	LDS gas leak comparison system
Other Gas Leak Standard Gases	$(1 \times 10^{-7} \text{ to } 9 \times 10^{-4}) \text{ scm}^3/\text{s}$	20 % of reading	
High Vacuum & Ultra High Vacuum Gauges – Ion and Cold Cathode Gauges	$(1 \times 10^{-3} \text{ to } 1 \times 10^{-7}) \text{ torr}$	3.5 % of reading	LDS vacuum gauge comparison system

Parameter	Range	Best Uncertainty ² (±)	Comments
Rough Vacuum Gauges – Thermocouple, Pirani Gauges, Convection Gauges, Capacitance Manometers	(1000 to 1×10^{-1}) torr (1×10^{-1} to 1×10^{-3}) torr	0.16 % of reading 0.51 % of reading	LDS vacuum gauge comparison system

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 and to influences from the circumstances of the specific calibration.

³ The range for this parameter is in standard cubic centimeters per second and is equivalent to one atmospheric cubic centimeters per second.