



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

LDS VACUUM PRODUCTS  
773 Big Tree Drive  
Longwood, FL 32750  
Cindy Lee Phone: 407 862 4643

CALIBRATION

Valid To: August 31, 2019

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 calibrations<sup>1</sup>:

I. Mechanical Quantities (Leak Standards and Vacuum Gages)

Parameter	Range <sup>3</sup>	CMC <sup>2,4</sup> (±)	Comments
Leak Rate – Helium Gas Leak Standards	$(1 \times 10^{-10} \text{ to } 9 \times 10^{-2}) \text{ scm}^3/\text{s}$	2.7 %	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 %	
High Vacuum & Ultra High Vacuum Gauges – Ion & Cold Cathode Gauges	$(1 \times 10^{-3} \text{ to } 1 \times 10^{-7}) \text{ torr}$	2.1 %	LDS vacuum gauge comparison system

Parameter	Range	CMC <sup>2,4</sup> (±)	Comments
Rough Vacuum Gauges – Thermocouple, Pirani Gauges, Convection Gauges, Capacitance Manometers	(1000 to $1 \times 10^{-3}$ ) torr	0.25 %	LDS vacuum gauge comparison system using capacitance manometers

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<sup>1</sup> This laboratory offers commercial calibration service.

<sup>2</sup> Calibration and Measurement Capability Uncertainty (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. CMCs 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.

<sup>3</sup> The unit  $\text{scm}^3/\text{s}$ , standard cubic centimeters per second, is equivalent to one atmospheric cubic centimeter per second.

<sup>4</sup> In the statement of CMC, percentages represent percent of reading, unless noted otherwise.



# 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/NCSLI Z540-1-1994 and R205 – Specific Requirements: Calibration Laboratory Accreditation Program. 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 18<sup>th</sup> day of August 2017.

A handwritten signature in black ink, appearing to be "L. J. ...", written over a horizontal line.

President and CEO  
For the Accreditation Council  
Certificate Number 1566.01  
Valid to August 31, 2019

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