



The American Association for Laboratory Accreditation

World Class Accreditation

# Accredited Laboratory

A2LA has accredited

## ALPHA TECHNOLOGIES SERVICES, LLC A DYNISCO CO.

*Akron, OH*

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 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 5<sup>th</sup> day of August 2009.

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

President & CEO  
For the Accreditation Council  
Certificate Number 2017.01  
Valid to May 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

ALPHA TECHNOLOGIES SERVICES, LLC  
 A DYNISCO CO.  
 3030 Gilchrist Rd.  
 Akron, OH 44305  
 Jeff Ward Phone: 330 745 1641

CALIBRATION

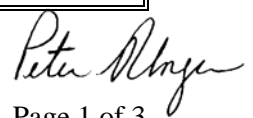
Valid To: May 31, 2011

Certificate Number: 2017.01

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

I. Dimensional

Parameter/Equipment	Range	Best Uncertainty <sup>2,4</sup> (±)	Comments
Dial Indicator <sup>3</sup>	(0 to 40) mm	(0.04 + 0.6R) mm	ASTM D3767 with gage blocks
Bore Diameter <sup>3</sup>	Up to 12.7 mm	0.0017 mm	ASTM D5099, D1238, D3835 with boroscope
Diameter <sup>3</sup>	(0.1 to 25) mm	0.002 mm	ASTM D3767 with micrometers
Extensometers <sup>3</sup>	(0 to 400) mm	0.29 mm	ASTM E83 with: Calibrated bar
	(400 to 1000) mm	0.60 mm	Precision ruler
Orifice <sup>3</sup> –  Bore Length	(0.254 to 3.175) mm	0.003 mm	ASTM D1238, D3835, D5099 with pin gage and micrometer
	Up to 508 mm	0.002 mm	



Parameter/Equipment	Range	Best Uncertainty <sup>2</sup> (±)	Comments
Piston Tip <sup>3</sup> – Outside Diameter Linear Length	Up to 12.7 mm Up to 19 mm	0.002 mm 0.002 mm	ASTM D1238, D3835 with micrometers

## II. Dimensional Testing

Parameter/Equipment	Range	Best Uncertainty <sup>2</sup> (±)	Comments
Length <sup>3</sup>	(0 to 400) mm	0.002 mm	Gage blocks with indicator

## III. Mechanical

Parameter/Equipment	Range	Best Uncertainty <sup>2,4</sup> (±)	Comments
Force – Tension and Compression <sup>3</sup>	(0 to 22) lbf (0 to 500) lbf (500 to 5000) lbf	0.05 % IV 0.05 % IV 0.05 % IV	ASTM E4 using load cells/ deadweights; IV represents indicated value
Torque – Static Dynamic <sup>3</sup> Handles	(0 to 200) in-lb (0 to 200) in-lb (0 to 100) in-lb	0.05 % IV 0.1 % IV 1.2 % IV	Dead weights Torque standard Torque wrench tester
Mass	(0.1 to 220) g (0.2 to 20) kg	0.003 g 1.2 g	ASTM D1238, scale and reference weights
Scales and Balances <sup>3</sup>	(0 to 20) kg	0.98 g	ASTM E898
Pressure Transducers <sup>3</sup>	(0 to 700) bar	4.4 bar	ASTM D3835, D5099

IV. Thermodynamics

Parameter/Equipment	Range	Best Uncertainty <sup>2</sup> (±)	Comments
Temperature – Measure <sup>3</sup>	Ambient to 250 °C	0.1 °C	ASTM D1646, D2084, D5289, D6204, D6601
Temperature Meters	Ambient to 200 °C	0.017 °C	ITS 90, oil bath with SPRT and digital readout
Barrel Temperature <sup>3</sup>	15 °C to 425 °C	0.076 °C	ASTM D1238, D3835, with Hart digital PRT

V. Time and Frequency

Parameter/Equipment	Range	Best Uncertainty <sup>2</sup> (±)	Comments
Dwell Time <sup>3</sup>	(0 to 24) hr	0.25 s	ASTM E898, D1646, D2084, D5289, D6204, D6601 with digital stop watch

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

<sup>2</sup> “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.

<sup>3</sup> 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 uncertainties achievable on a customer's site can normally be expected to be larger than the Best Measurement Capabilities (BMC) that the accredited laboratory has been assigned as Best Uncertainty 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 uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the calibration uncertainty being larger than the BMC.

<sup>4</sup> In the statement of best uncertainty,  $R$  is the numerical value of the resolution of the device.