SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

DYNAMIC CORPORATION[6]
2565 Van Ommen Drive
Holland, MI 49424
Samantha Kandler Phone: 616 399 2200

MECHANICAL

Valid To: January 31, 2019 Certificate Number: 1167.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following dimensional testing at the location listed above as well as at the satellite laboratory location listed below[1]:

I. Dimensional Testing/Calibration[1]

Parameter/Equipment	Range	CMC[2] (±)	Comments
Length (1D)[3, 5]	Up to 3 in (3 to 4) in Up to 12 in	130 µin 440 µin 450 µin	Micrometers Calipers
Height[3, 5]	Up to 24 in	1300 µin	Height gages
Depth[3, 5]	Up to 1 in	420 µin	Depth micrometers
Radius[3, 5]	(0.01 to 0.5) in (0.5 to 1) in	2900 µin 9000 µin	Radius gages
Diameter[3, 5]	(0.011 to 0.75) in	850 µin	Gage pins
Surface Finish[3, 5]	Up to 0.0315 in	7.4 µin	Profilometer (surface roughness tester)

5202 Presidents Court, Suite 220 | Frederick, MD 21703-8398 | Phone: 301 644 3248 | Fax: 240 454 9449 | www.A2LA.org

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Optical 3D Measuring System[3, 5] –			
Steel	60 mm Lens	(410 + 13*L*) µin	GOM/ATOS Triple Scan "Blue Light"
Aluminum		(410 + 40*L*) µin	
Non-metal		(410 + 210*L*) µin	
Steel	100 mm Lens	(470 + 16*L*) µin	
Aluminum		(470 + 44*L*) µin	
Non-metal		(470 + 220*L*) µin	
Steel	300 mm Lens	(560 + 25*L*) µin	
Aluminum		(560 + 15*L*) µin	
Non-metal		(560 + 180*L*) µin	
Steel	700 mm Lens	(890 + 27*L*) µin	
Aluminum		(890 + 16*L*) µin	
Non-metal		(890 + 180*L*) µin	
Coordinate Measurement (CMM)[5] –			
Steel	Up to (35 × 47 × 31) in	(230 + 7.1*L*) µin	Bridge CMM
Aluminum		(230 + 33*L*) µin	
Non-metal		(230 + 210*L*) µin	
Steel	Up to (48 × 40 × 30) in	(480 + 4.7*L*) µin	Bridge CMM
Aluminum		(480 + 29*L*) µin	
Non-metal		(480 + 200*L*) µin	
Steel	> (48 × 40 × 30) in	(690 + 5.2*L*) µin	Bridge CMM
Aluminum	Up to (80 × 48 × 40) in	(690 + 30*L*) µin	
Non-metal		(690 + 210*L*) µin	
Steel	Up to (118 × 63 × 63) in	(860 + 5.8*L*) µin	Horizontal arm CMM
Aluminum		(860 + 31*L*) µin	
Non-metal		(860 + 210*L*) µin	

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Coordinate Measurement (CMM)[3, 5] – (cont)			
Steel Aluminum Non-metal	Up to (20 × 20 × 20) in	(330 + 17*L*) µin (330 + 8.5*L*) µin (330 + 170*L*) µin	Portable optical CMM (TRITOP)
Steel Aluminum Non-metal	> (20 × 20 × 20) in Up to (39 × 39 × 39) in	(830 + 15*L*) µin (830 + 7.3*L*) µin (830 + 160*L*) µin	Portable optical CMM (TRITOP)
Steel Aluminum Non-metal	> (39 × 39 × 39) in Up to (197 × 197 × 197) in	(870 + 25*L*) µin (870 + 15*L*) µin (870 + 180*L*) µin	Portable optical CMM (TRITOP)
X-Y Coordinates[5] –			
Steel Aluminum Non-metal	Up to (24 × 24 × 16) in	(120 + 8.1*L*) µin (120 + 35*L*) µin (120 + 210*L*) µin	Optiv Performance 664
Steel Aluminum Non-metal	Up to (6 × 4) in	(1400 + 0.49*L*) µin (1400 + 5.3*L*) µin (1400 + 130*L*) µin	Optical comparator
Steel Aluminum Non-metal	Up to (35 × 47 × 31) in	(320 + 6*L*) µin (320 + 31*L*) µin (320 + 210*L*) µin	CMM-V optical probe head for CMM

[1] This laboratory offers commercial dimensional testing/calibration service.

[2] 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 or tests 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 or test 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 or test.

[3] Field services are available for this calibration or test and this laboratory meets A2LA *R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations or tests. 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 or test and for other possible adverse effects such as those caused by transportation of the calibration or testing equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated or tested, (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] In the statement of CMC, *L* represents the numerical value of the nominal length of the device measured in inches.

[5] This laboratory meets *R205 – Specific Requirements: Calibration Laboratory Accreditation Program* for the types of dimensional tests listed above and is considered equivalent to that of a calibration.

[6] This accreditation covers testing/calibration performed at the main laboratory listed above, and the following satellite laboratory listed below:

DYNAMIC CORPORATION
921 E 32nd Street
Holland, MI 49423
Samantha Kandler Phone: 616 399 2200

I. Dimensional Testing/Calibration[1]

Parameter/Equipment	Range	CMC[2] (±)	Comments
Length (1D) [3, 5]	Up to 3 in (3 to 4) in Up to 12 in	130 µin 440 µin 450 µin	Micrometers Micrometers Calipers
Height[3, 5]	Up to 24 in	1400 µin	Height gages
Depth[3, 5]	Up to 1 in	420 µin	Depth micrometers
Thickness[3, 5]	Up to 0.5 in	420 µin	Thickness gages
Radius[3, 5]	(0.01 to 0.5) in (0.5 to 1) in	2900 µin 9000 µin	Radius gages
Diameter[3, 5]	(0.011 to 0.75) in	850 µin	Gage pins

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
Optical 3D Measuring System[3, 5] –			
Steel	120 mm Lens	(560 + 16L) µin	GOM/ATOS Capsule "Blue Light"
Aluminum		(560 + 44*L*) µin	
Non-metal		(560 + 220*L*) µin	
Steel	320 mm Lens	(760 + 25*L*) µin	
Aluminum		(760 + 15*L*) µin	
Non-metal		(760 + 180*L*) µin	
Steel	560 mm Lens	(670 + 27*L*) µin	GOM/ATOS Core "Blue Light"
Aluminum		(670 + 17*L*) µin	
Non-metal		(670 + 180*L*) µin	
Coordinate Measurement (CMM)[3, 5] –			
Steel	Up to (20 × 20 × 20) in	(330 + 17*L*) µin	Portable optical CMM (TRITOP)
Aluminum		(330 + 8.5*L*) µin	
Non-metal		(330 + 170*L*) µin	
Steel	> (20 × 20 × 20) in	(830 + 15*L*) µin	Portable optical CMM (TRITOP)
Aluminum	Up to (39 × 39 × 39) in	(830 + 7.3*L*) µin	
Non-metal		(830 + 160*L*) µin	
Steel	> (39 × 39 × 39) in	(870 + 25*L*) µin	Portable optical CMM (TRITOP)
Aluminum	Up to (197×197×197) in	(870 + 15*L*) µin	
Non-metal		(870 + 180*L*) µin	
Coordinate Measurement (CMM)[5] –			
Steel	Up to (24 × 24 × 24) in	(460 + 2.9*L*) µin	Bridge CMM
Aluminum		(460 + 23*L*) µin	
Non-metal		(460 + 200*L*) µin	
Steel	Up to (80 × 48 × 40) in	(690 + 5.2*L*) µin	Bridge CMM
Aluminum		(690 + 30*L*) µin	
Non-metal		(690 + 200*L*) µin	
Steel	Up to (118 × 63 × 63) in	(3900 + 1.5*L*) µin	Horizontal arm CMM
Aluminum		(3900 + 16*L*) µin	
Non-metal		(3900 + 180*L*) µin	

Parameter/Equipment	Range	CMC[2, 4] (±)	Comments
X-Y Coordinates[5] – Steel Aluminum Non-metal	Up to (6 × 4) in	(1500 + 0.46*L*) μin (1500 + 5.0*L*) μin (1500 + 130*L*) μin	Optical comparator

[1] This laboratory offers commercial dimensional testing/calibration service.

[2] 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 or tests 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 or test 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 or test.

[3] Field services are available for this calibration or test and this laboratory meets A2LA *R104 – General Requirements: Accreditation of Field Testing and Field Calibration Laboratories* for these calibrations or tests. 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 or test and for other possible adverse effects such as those caused by transportation of the calibration or testing equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated or tested, (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] In the statement of CMC, *L* represents the numerical value of the nominal length of the device measured in inches.

[5] This laboratory meets *R205 – Specific Requirements: Calibration Laboratory Accreditation Program* for the types of dimensional tests listed above and is considered equivalent to that of a calibration.

Accredited Laboratory

A2LA has accredited

DYNAMIC CORPORATION

Holland, MI

for technical competence in the field of

Mechanical Testing

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 *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 22nd day of December 2016.

President and CEO
For the Accreditation Council
Certificate Number 1167.01
Valid to January 31, 2019

For the tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.