SCORE OF ACCREDITATION TO ISO/IEC 17025:2017

QC GROUP, LLC.[2]
5950 Clearwater Drive, Suite 300
Minnetonka, MN 55343-8989
Lee Fletcher   Phone: 952 895 1150
lee.fletcher@industrial-ia.com

MECHANICAL

Valid To: October 31, 2024   Certificate Number: 1172.01

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

I. Dimensional Testing[1]

Parameter/Equipment	Range	CMC[,3, 4] ($\pm$)	Comments
Workpiece Measurement[4] –			Internal method based on ASME Y14.5 and customer specification
1D	Up to 12 in Up to 1 in Up to 6 in Up to 1 in Up to 1 in	0.0013 in 0.00016 in 0.00015 in 0.00015 in ---	Calipers Micrometer Depth micrometer Pressure micrometer Gage pins used for attribute/qualitative test
2D	(18 x 18) in (8 x 6) in Up to 4 in	$(250 + 7.1L)$ µin 0.00062 in 0.0002 in	OGP - optical CMM Optical comparator Toolmaker's microscope
3D	Up to 8 ft (spherical range) (28 x 40 x 28) in (40 x 64 x 28) in	$(1100 + 11L)$ µin $(360 + 14L)$ µin $(40 + 18L)$ µin	Faro Arm CMM (Platinum) CMM (UHA) CMM (Scanning)
Flatness[5]	Up to 0.008 in	0.000 25 in	Internal method based on ASME Y14.5 and customer specification; dial indicator

[1] This accreditation covers testing performed at the main laboratory listed above, and the following satellite laboratories listed below:

QC GROUP, LLC.[2]
1451 Innovation Parkway SE, Suite 650
Albuquerque, NM 87123
Lee Fletcher   Phone: 952 895 1150
lee.fletcher@industrial-ia.com

I. Dimensional Testing[1]

Parameter/Equipment	Range	CMC[3,4] (±)	Comments
Workpiece Measurement[4] –			Internal method based on ASME Y14.5 and customer specification
1D	Up to 12 in Up to 1 in	0.0013 in 0.00016 in	Calipers Micrometer
3D	(16 x 16 x 12) in (28 x 40 x 28) in	$(11 + 25L)$ µin $(360 + 14L)$ µin	Optiv CMM CMM (UHA)

<u>SATELLITE FACILITY</u>

QC GROUP, LLC.[2]
4100 West Royal Lane, Suite 125
Irving, TX 75063
Lee Fletcher   Phone: 952 895 1150
lee.fletcher@industrial-ia.com

I. Dimensional Testing[1]

Parameter/Equipment	Range	CMC[3, 4] (±)	Comments
Workpiece Measurement[4] –			Internal method based on ASME Y14.5 and customer specification
1D	Up to 12 in Up to 1 in	0.0013 in 0.00016 in	Calipers Micrometer
3D	(16 x 16 x12) in (28 x 40 x 28) in	$(11 + 25L)$ µin $(360 + 14L)$ µin	Optiv CMM CMM (UHA)

_____

[2] This laboratory offers commercial dimensional testing services only.

[3] 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 measurements 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 measurement 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 measurement.

[4] In the statement of CMC, L represents the nominal length of the device measured in inches.

[5] This test is not equivalent to that of a calibration.

Accredited Laboratory

A2LA has accredited

QC GROUP, LLC

Minnetonka, MN

for technical competence in the field of

Mechanical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. 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 April 2017*).

Presented this 8th day of November 2022.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1172.01
Valid to October 31, 2024

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