



# CERTIFICATE OF ACCREDITATION

## ANSI-ASQ National Accreditation Board

500 Montgomery Street, Suite 625, Alexandria, VA 22314, 877-344-3044

This is to certify that

**Quality Engineering Service of the Chippewa Valley, Inc.**  
**345 Frenette Drive**  
**Chippewa Falls, WI 54729**

has been assessed by ANAB  
and meets the requirements of international standard

**ISO/IEC 17025:2005**

and national standard

**ANSI/NCSL Z540-1-1994**

while demonstrating technical competence in the field of

**TESTING & CALIBRATION**

Refer to the accompanying Scope of Accreditation for information regarding the types of calibrations to which this accreditation applies.

ACT-1189  
Certificate Number

  
ANAB Approval

Certificate Valid: 09/06/2016-09/22/2018  
Version No. 003 Issued: 09/06/2016



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. 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 January 2009).



# ANSI-ASQ National Accreditation Board

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

### Quality Engineering Service of the Chippewa Valley, Inc.

345 Frenette Drive Chippewa Falls, WI 54729  
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### TESTING and CALIBRATION

Valid to: September 22, 2018

Certificate Number: ACT-1189

#### I. Mechanical Testing

Field of Test	Items, Materials or Products Tested	Specific Tests or Properties Measured	Specification, Standard Method or Technique Used	*Detection Limit / Range/ Equipment
Push Test	Plastic Fasteners, Screws, Adhesives, 3-D objects within equipment operational range	Tensile, Shear	CUP-T1001-A	Up to 1 000 lb Lloyd Type B
Push Test	Plastic Fasteners, Screws, Adhesives, 3-D objects within equipment operational range	Tensile, Shear	CUP-T1002-A	Up to 1 000 lb Lloyd Type B
Pull Test	Plastic Fasteners, Screws, Adhesives, 3-D objects within equipment operational range	Tensile, Shear, Elongation, Breaks	CUP-T1002-A	Up to 1 000 lb Lloyd Type B
Pull Test	Plastic Fasteners, Screws, Adhesives, 3-D objects within equipment operational range	Tensile, Pluck, Elongation, Breaks	CUP-T1004-A	Up to 1 000 lb Lloyd Type B
Shear Test	Plastic Fasteners, Screws, Adhesives, 3-D objects within equipment operational range	Shear, Elongation, Breaks, Adhesion Strength	CUP-T1003-A	Up to 1 000 lb Lloyd Type B
Shear Test	Plastic Fasteners, Screws, Adhesives, 3-D objects within equipment operational range	Shear, Elongation, Breaks, Adhesion Strength	CUP-D1002-A	Up to 1 000 lb Lloyd Type B
Torque Testing	Screws, Grommets, Bolts	Strip Torque, Drive Torque, Torsional Strength	CUP-F.I.P 1000-A	Up to 300 in-lb Torque Wrench, Type B Tolerance $\pm$ % of Reading
Ductility Testing	Screws & Bolts	Ductility Testing	CUP-F.I.P 1000-A	Empirical Observation for Pass / Fail
Drive Test	Screws & Bolts	Drive Test	CUP-F.I.P 1000-A	Empirical Observation for Pass / Fail



Field of Test	Items, Materials or Products Tested	Specific Tests or Properties Measured	Specification, Standard Method or Technique Used	*Detection Limit / Range/ Equipment
Part Weighing	3-D objects within equipment operational range	Part Weights	RFM-0025-1	Up to 310 g ± .0036 g

## II. Dimensional Inspection

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty(±)]	Reference Standard or Equipment	Method(s)
Dimensional 1D	Up to 6 in (6 to 60) in	730 μin 910 μin	Caliper	Blue Print or Customer Specification
Dimensional 1D	Up to 16 in	740 μin	Height Gage	Blue Print or Customer Specification
Dimensional 1D	Up to 6 in	730 μin	Length Gage	Blue Print or Customer Specification
Dimensional 1D	Up to 2 in	96 μin	Micrometer	Blue Print or Customer Specification
Dimensional 1D	Up to 6 in	130 μin	Depth Micrometer	Blue Print or Customer Specification
Dimensional 1D	Up to 1 in (1 to 2) in	93 μin 95 μin	Drop Indicator	Blue Print or Customer Specification
Dimensional 1D	Up to 0.003 in	77 μin	Test Indicator	Blue Print or Customer Specification
Dimensional 1D	(0.011 to 0.6255) in	580 μin	Pin Gages	Blue Print or Customer Specification
Dimensional 1D	Up to 14 in	130 μin	Gage Blocks	Blue Print or Customer Specification
Dimensional 1D	(0.01 to 0.5) in (0.5 to 13) mm	2900 μin 73 μm	Radius Gages	Blue Print or Customer Specification
Dimensional 1D	Up to 0.5 in Radius: Up to 0.5 in Angular: 90 °	2900 μin 0.036 inches 1.6 °	Handheld Microscope (7x)	Blue Print or Customer Specification
Dimensional 2D	Up to 14 in Dia. & Radius : Calculated Angular : 360 °	460 μin  0.19 °	Optical Comparator	Blue Print or Customer Specification
Dimensional 2D	Up to 4 in Radius : 3 mm Angular : 360 °	490 μin 0.12 mm 0.11 °	Measuring Microscope	Blue Print or Customer Specification

<b>Parameter/ Equipment</b>	<b>Range</b>	<b>Calibration and Measurement Capability [Expressed as Uncertainty(±)]</b>	<b>Reference Standard or Equipment</b>	<b>Method(s)</b>
Dimensional 2D	Up to 1 in	43.0 μin	Laser Micrometer	Blue Print or Customer Specification
Dimensional 3D	X & Y = Up to 12 in Z = Up to 6 in Volumetric : Calculated Angular : 360 °	110 μin 110 μin 0.0059 °	Video Measuring System	Blue Print or Customer Specification
Dimensional 3D	X & Y = Up to 20 in Z = Up to 16 in Volumetric : Calculated Angular : 360 °	270 μin 170 μin 0.065 °	Brown & Sharpe Coordinate Measuring Machine	Blue Print or Customer Specification
Dimensional 3D	X & Y = Up to 40 in Z = Up to 24 in Volumetric : Calculated Angular : 360 °	45 μin 45 μin 0.0042 °	Coordinate Measuring Machine – Zeiss Contura G2 Scanning	Blue Print or Customer Specification
Dimensional Visual Comparison	Pitches UNC (4 to 84)	Nearest 2 teeth per Inch	Screw Pitch Gage	Blue Print or Customer Specification

### III. Dimensional Calibration

<b>Parameter/ Equipment</b>	<b>Range</b>	<b>Calibration and Measurement Capability [Expressed as Uncertainty(±)]</b>	<b>Reference Standard or Equipment</b>	<b>Method(s)</b>
Calipers	Up to 60 in	(590 + 25L) μin	Caliper Calibration Set Gage Blocks	Cal-001
Height Gages	Up to 20 in	(600 + 9.3L) μin	Gage Blocks	Cal-001
Length Gages	Up to 20 in	(590 + 25L) μin	Gage Blocks	Cal-001
Micrometers (ID, OD, Depth)	Up to 12 in	(91 + 3.1L) μin	Gage Blocks	Cal-002 Cal-017 Cal-020
Drop or Dial Indicators	(0.0001 to 6) in	(91 + 1.6L) μin	Gage Blocks	Cal-003
Test Indicators	(0.0001 to 0.100) in	77 μin	Gage Blocks	Cal-004

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty(±)]	Reference Standard or Equipment	Method(s)
Radius Gages	Up to 10 in	110 μin	Video Measurement System	Cal-013
Protractors	Up to 180 °	0.0059 °	Angle Blocks	Cal-015
Pin Gages	(0.010 to 1.000) in	(43 - .80L) μin	Laser Micrometer	Cal-018
Thickness Gages & Other Fixed Gages  Report of Values Only	Up to 2.0 in  Up to 12 in Up to 360 °  Up to 20 in / Up to 360 °  Up to 40 in Up to 360 °	96 μin  110 μin 0.0059 °  260 μin 0.065 °  (21 + 1.3L) μin 0.00042 °	High Accuracy Digital Indicator  Video Measurement System  Coordinate Measuring Machine – Manual Brown & Sharp  Coordinate Measuring Machine – Zeiss Contura G2	Cal-014, Cal-019  Cal-020 & Cal-014
Gage Blocks	Up to 40 in	(21 + 1.3L) μin	Coordinate Measuring Machine – Zeiss Contura G2 Gage Block Comparison Indicator	Cal-020
Steel Rules	Up to 36 in	2 900 μin	Microscope Handheld / Master Steel Rule	Cal-016
Coordinate Measuring Machines	Up to 48 in	45 μin	CMM Calibration Gage Blocks Spherical Ball Bar	Cal-022 ASME B89.4.1-1997

#### IV. Mechanical Calibration

Parameter/ Equipment	Range	Calibration and Measurement Capability [Expressed as Uncertainty(±)]	Reference Standard or Equipment	Method(s)
Scales & Balances	Up to 600 g	.0036 g	Calibration Weight Set	Cal-021

**Notes :**

1. = As Applicable
2. Calibration and Measurement Capabilities represent expanded uncertainties at approximately the 95% confidence level using a coverage factor of  $k=2$ .
3. This laboratory offers commercial calibration, dimensional, functional testing and documentation services.
4. The term L represents length in inches.
5. This scope is formatted as part of a single document including the Certificate of Accreditation No. ACT - 1189



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Vice President