SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

FASTENAL COMPANY LABORATORY
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Winona, MN 55987
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CALIBRATION

Valid To: September 30, 2020 Certificate Number: 1046.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations[1, 5]:

I. Dimensional

Parameter/Equipment	Range	CMC[2, 3] (±)	Comments
Calipers –	Up to 12 in Up to 60 in	(540 + 17*L*) µin (310 + 14*L*) µin	Gage blocks
Micrometers, Outside –	Up to 12 in (>12 to 18) in (>18 to 36) in	(66 + 5*L*) µin (590 + 4*L*) µin (583 + 2.6*L*)	Gage blocks
Indicators –	Up to 6 in	(29 + 0.6*R*) µin	ULM
Thread Plugs – Pitch Diameter Major Diameter	 Up to 5 in Up to 5 in	 (121 + 20*D*) µin (85 - 7*D*) µin	 ULM using 3-wire method
Height Gages –	Up to 24 in	(316 + 14.6*L*) µin	Gage blocks

Parameter/Equipment	Range	CMC[2, 3] (±)	Comments
Adjustable Threaded Rings[4] –			
Functional Pitch Diameter	Up to 1 in (1 to 4) in	300 µin 400 µin	Set using master plug gages ASME/ANSI B1.2-18983 and ASME/ANSI B1.3-2007
Minor Diameter	Up to 1 in	600 µin	Plain cylindrical plugs
Tapered Thread Plugs –			
Notch Height	(1/16 to 2) in	280 µin	Master rings
Functional Pitch Diameter at Base	(0.28 to 2.30) in	210 µin	
Tapered Ring Gages –			
Thickness	(1/16 to 2) in	43 µin	Master plugs
Functional Pitch Diameter at Base	(0.28 to 2.30) in	210 µin	
Micrometer Standards	Up to 23 in	(43 + 7*L*) µin	ULM
Hex Plug / Hex Recess Gages –			
Width Across Flats Width Across Corners	Up to 1 in Up to 1 in	44 µin 47 µin	ULM
Cylindrical Plugs	Up to 1.5 in	(39 + 10*D*) µin	ULM
Torque Tools	20 in·lbf to <20 ft·lbf (20 to <1000) ft·lbf (1000 to 1500) ft·lbf	1.7 % full scale 0.7 % full scale 0.4 % full scale	Torque transducers

[1] Commercial calibration service is available for this laboratory.

[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 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.

[3] In the statement of CMC, *R* is the resolution of the unit under test, *L* is the numerical value of the nominal length of the device expressed in inches, *D* is the numerical value of the nominal Diameter of the device expressed in inches.

[4]Adjustable thread rings are set to applicable specifications using calibrated master plug gages.

[5] This scope meets A2LA's *P112 Flexible Scope Policy*.

Accredited Laboratory

A2LA has accredited

FASTENAL COMPANY LABORATORY

Winona, MN

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 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 April 2017*).

Presented this 19th day of November 2018.

President and CEO
For the Accreditation Council
Certificate Number 1046.02
Valid to September 30, 2020

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