



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

Encore Systems, Inc.

90 Mosier Parkway

Brookville, OH 45309

(and satellite locations as shown on the scope)

Fulfills the requirements of

ISO/IEC 17025:2017

and national standard

ANSI/NCSL Z540-1-1994 (R2002)

In the field of

CALIBRATION

This certificate is valid only when accompanied by a current scope of accreditation document.
The current scope of accreditation can be verified at www.anab.org.

A handwritten signature in black ink, appearing to read 'R. Douglas Leonard Jr.', is positioned above a horizontal line.

R. Douglas Leonard Jr., VP, PILR SBU

Expiry Date: 08 September 2022

Certificate Number: AC-1140



This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017.
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).

**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017
AND ANSI/NCSL Z540-1-1994 (R2002)**

Encore Systems, Inc.

90 Mosier Parkway
Brookville, OH 45309
Rick Meredith
937-833-4469

CALIBRATION

Valid to: **September 8, 2022**

Certificate Number: **AC-1140**

Length – Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Calipers	Up to 12 in	643 μ m	Gage Blocks, Length Standards
Depth Gages	Up to 12 in	145 μ m	
Gap Gages	Up to 12 in	147 μ m	Gage Blocks, Micrometers
Height Gages	Up to 24 in	0.002 in	Gage Blocks, Length Standards
Indicators	Up to 6 in	131 μ m	
Micrometers	Up to 12 in	147 μ m	

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Hand-held Torque Wrenches ¹	Up to 250 lbf·in (0.2 to 1 000) lbf·ft	0.48 lbf·in 1.5 lbf·ft	Signal Conditioners, Precision Torque Transducers
DC Power Torque Tools ¹	(0.05 to 300) lbf·ft	0.27 % of reading	
DC Power Torque Tools	(0.05 to 1 000) lbf·ft	1.2 lbf·ft	
Air Tools-Transducers ¹	(0.05 to 1 000) lbf·ft	0.9 lbf·ft	

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Torque Transducers	Up to 100 lbf·in 100 lbf·in to 20 lbf·ft (20 to 1 100) lbf·ft	0.099 % of reading 0.044 % of reading 0.017 % of reading	Signal Conditioners, Reference Weights, Deadweight Fixture, Torque Arms
Controllers and Signal Conditioners – Simulation (Up to 100 % range)	(0.05 to 1 000) lbf·ft	0.4 lbf·ft	Digital Multimeter, Precision DC Power Supply, Precision Torque Transducer, Dead Weights, Dead Weight Fixture, Torque Arms

Time and Frequency

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Time	Up to 7 200 s	0.3 s	Comparison to NIST Standard Clock

Services performed at the satellite location

Encore Systems, Inc.
Unit 20 Darwell Park, Amington Industrial Estate
Tamworth, B77 4DR
Staffordshire, England

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Power Tools	(0.05 to 300) lbf·ft	0.27 % of reading	Signal Conditioners, Precision Torque Transducers

Services performed at the satellite location

Encore Systems, Inc.
Orion #1463 Int. 1
Parque Industrial Orion
Apodaca, Nuevo Leon, Mexico CP66600

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Power Tools	(0.05 to 300) lbf·ft	0.27 % of reading	Signal Conditioners, Precision Torque Transducers

Services performed at the satellite location

Encore Systems, Inc.
Libramiento Politecnico #116, Ampliacion Los Angeles
Salamanca, Guanajuato, Mexico 36782

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Power Tools	(0.05 to 300) lbf·ft	0.27 % of reading	Signal Conditioners, Precision Torque Transducers

Services performed at the satellite location

Encore Systems, Inc.
International Bus Assy Plant
2322 North Mingo Road
Tulsa, OK 74116

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Power Tools	(0.05 to 300) lbf-ft	0.27 % of reading	Signal Conditioners, Precision Torque Transducers

Services performed at the satellite location

Encore Systems, Inc.
2300 Bristol Circle, Unit 4
Oakville, ON L6H 5S3, Canada

Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
DC Power Tools	(0.05 to 300) lbf-ft	0.27 % of reading	Signal Conditioners, Precision Torque Transducers

Calibration and Measurement Capability (CMC) is expressed in terms of the measurement parameter, measurement range, expanded uncertainty of measurement and reference standard, method, and/or equipment. The expanded uncertainty of measurement is expressed as the standard uncertainty of the measurement multiplied by a coverage factor of 2 ($k=2$), corresponding to a confidence level of approximately 95%.

Notes:

1. On-site calibration service is available for this parameter, since on-site conditions are typically more variable than those in the laboratory, larger measurement uncertainties are expected on-site than what is reported on the accredited scope.
2. This scope is formatted as part of a single document including Certificate of Accreditation No. AC-1140.



R. Douglas Leonard Jr., VP, PILR SBU