



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

HORIBA Instruments Incorporated
2890 John R. Rd.
Troy, MI 48083
(and satellite location as shown on the scope)

Fulfills the requirements of

ISO/IEC 17025:2017

In the fields of

CALIBRATION and TESTING

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.

Jason Stine, Vice President

Expiry Date: 24 February 2026

Certificate Number: ACT-1312



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

HORIBA Instruments Incorporated

2890 John R Rd.

Troy, MI 48083

Marie Squier

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www.hii.horiba.com

CALIBRATION AND TESTING

Valid to: February 24, 2026

Certificate Number: ACT-1312

TESTING

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Radial Loading (force / strain) Fatigue and/or durability	Customer Supplied and/or F-LMS-012-Test- Acceptance-Document	Customer Supplied	Hydraulic Actuator up to 100,000 lbf / 2,500 $\mu\epsilon$ (micro-strain)
Axial Loading (force / strain) Fatigue and/or durability	Customer Supplied and/or F-LMS-012-Test- Acceptance-Document	Customer Supplied	Hydraulic Actuator up to 100,000 lbf / 2,500 $\mu\epsilon$ (micro-strain)
Torsional Loading Fatigue and/or durability	Customer Supplied and/or F-LMS-012-Test- Acceptance-Document	Customer Supplied	Rotary Hydraulic Actuation up to 5,000 lbf ft; Dynamometer up to 5,000 pound-feet
Dynamic Loading (Force/Acceleration/ Strain) Fatigue and/or durability	Customer Supplied and/or F-LMS-012-Test- Acceptance-Document	Customer Supplied	Hydraulic Actuator up to 100 G/measure up to 500 G / 2 500 $\mu\epsilon$ (micro-strain)
Dynamic Torsional Loading Fatigue and/or durability	Customer Supplied and/or F-LMS-012-Test- Acceptance-Document	Customer Supplied	Rotary Hydraulic Actuator up to 2,500 lbf ft; Dynamometer up to 5,000 lbf ft
Static Pressure Fatigue and/or durability	Customer Supplied and/or F-LMS-012-Test- Acceptance-Document	Customer Supplied	Hydraulic Pressure up to 20,000 psi
Dynamic Pressure Fatigue and/or durability	Customer Supplied and/or F-LMS-012-Test- Acceptance-Document	Customer Supplied	Hydraulic Pressure up to 10,000 psi
Rotational Speed Fatigue and/or durability	Customer Supplied and/or F-LMS-012-Test- Acceptance-Document	Customer Supplied	Dynamometers/Motors up to 18,000 RPM

Mechanical

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Linear Displacement Fatigue and/or durability	Customer Supplied and/or F-LMS-012-Test-Acceptance-Document	Customer Supplied	Hydraulic Actuator – up to 20 in / measure –up to 20 in
Angular/Rotary Displacement Fatigue and/or durability	Customer Supplied and/or F-LMS-012-Test-Acceptance-Document	Customer Supplied	Encoder: +/- 2,880° Inclinometer: +/- 90° (Digital Gage)

Thermodynamic / Environmental Simulation

Specific Tests and/or Properties Measured	Specification, Standard, Method, or Test Technique	Items, Materials or Product Tested	Key Equipment or Technology
Temperature Fatigue and/or durability	Customer Supplied and/or F-LMS-012-Test-Acceptance-Document	Customer Supplied	Thermal Chambers (-100 to 250) °F Natural Gas Burners up to 2,000 °F
Temperature and Humidity (Static and Dynamic) Fatigue and/or durability	Customer Supplied and/or F-LMS-012-Test-Acceptance-Document	Customer Supplied	Thermal Chamber Humidifier/Steam Generator (25 to 95) %RH

Services performed at satellite laboratory

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Ann Arbor, MI 48108
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CALIBRATION

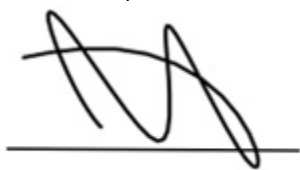
Mass and Mass Related

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
Air/Gas Flow ¹	(0.002 to 60) slpm	0.28 % of reading	Nitrogen (N ₂), Fluke Molbox 1+A700K-A, Molbloc-L
Air/Gas Flow ¹	(0.002 to 60) slpm	0.28 % of reading	Propane (C ₃ H ₈), Fluke Molbox 1+A700K-A, Molbloc-L

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%.

Note:

1. On-site calibration service may be 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. ACT-1312.



Jason Stine, Vice President