



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

FARO Japan Inc.
716, Kumada, Nagakute-shi
Aichi, 480-1144, Japan

Fulfills the requirements of

ISO/IEC 17025:2017

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: 25 January 2022

Certificate Number: L1147.06-1



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

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CALIBRATION

Valid to: **January 25, 2022**

Certificate Number: **L1147.06-1**

Length-Dimensional Metrology

| Parameter/Equipment | Range | Expanded Uncertainty of Measurement (+/-) ² | Reference Standard, Method, and/or Equipment |
|---|---|--|---|
| Articulated Arm Coordinate Measurement Machine (AACMM): Volumetric Performance | (0 to 0.9) m (0 to 2.2) m | (0.35 + 0.45L) μm 3.5 μm | ASME B89.4.22-2004 at 5.2, 5.3 and 5.4 ISO 10360-2:2001 Ball Bar Kinematic Scale Bar |
| Effective Diameter | (3 to 25.4) mm | 1 μm | Test Sphere |
| Articulated Arm Coordinate Measurement Machine (AACMM): Probing Size Error (PSize) | Sphere Diameter: 25.4 mm | 1 μm | ISO 10360-12:2016 6.2, 6.3, 6.4 Test Sphere |
| Probing Form Error (PForm) | Sphere Diameter: 25.4 mm | 0.9 μm | Test Sphere |
| Articulated Location Error (LDia) | Sphere Diameter: 25.4 mm | 1.7 μm | Test Sphere |
| Length Measurement Error, Unidirectional (EUni) | (0 to 1.05) m (0 to 1.36) m (0 to 1.8) m (0 to 2.11) m (0 to 2.42) m (0 to 2.64) m | 3.1 μm 3.7 μm 4.0 μm 5.7 μm 6.4 μm 8.4 μm | Kinematic Scale Bar |

Length-Dimensional Metrology

| Parameter/Equipment | Range | Expanded Uncertainty of Measurement (+/-) ² | Reference Standard, Method, and/or Equipment |
|--|---|--|--|
| Articulated Arm Coordinate Measurement Machine (AACMM): Single Point Articulation Performance | N/A ³ | 0.41 μm | B89.4.22-2004 and ISO 10360-12:2016 Test Sphere |
| Articulated Arm Coordinate Measuring Machines (AACMM) with Optical Distance Sensors: Articulated Location Value | Sphere Diameter: 50.8 mm | 4.4 μm | Based on ISO 10360-08:2013 Annex D Test Sphere |
| Laser Line Probe (LLP): Diameter Z Distance/Position | Cylinder Diameter: 25.4 mm 25.4 mm 25.4 mm (75 to 360) mm (80 to 230) mm | 1.8 μm 3.8 μm 7.0 μm 1.5 μm 2.9 μm | Internal Procedure: Reference Cylinder Calibrated Distance/ Position by Laser Interferometer |
| Faro Laser Tracker: Ranging Length Measurement | (0.04 to 25) m | (2 + 0.4L) μm | ASME B89.4.19-2006: Reference Laser Tracker |
| Faro Laser Tracker: Transverse Length Measurement | (0.23 to 6.2) m | (8 + 1.2X) μm | ASME B89.4.19:2006 Reference Laser Tracker Kinematic Scale Bars |

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. L = Length in meters, X = the perpendicular distance from the tracker to the space frame.
3. Point measurements do not have a range.
4. This scope is formatted as part of a single document including Certificate of Accreditation No. L1147.06-1.



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