



CERTIFICATE OF ACCREDITATION

The ANSI National Accreditation Board

Hereby attests that

FARO Singapore PTE LTD
No. 3 Changi South Street 2
#01-01 Xilin Districentre Building B, Singapore, 486548

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: L1147.09-1



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

FARO Singapore PTE LTD

No. 3 Changi South Street 2
#01-01 Xilin Districentre Building B, Singapore, 486548
Chee Wei Yeong (Customer Service): 65-6511-1312
Adrian Lim (Total Quality): +65 65111372

CALIBRATION

Valid to: **January 25, 2022**

Certificate Number: **L1147.09-1**

Length-Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
Articulated Arm Coordinate Measurement Machine (AACMM):			ASME B89.4.22-2004 at 5.2, 5.3 and 5.4 ISO 10360-2:2001
Volumetric Performance	(0 to 0.9) m (0 to 2.2) m	(0.35 + 0.45L) μm 3.5 μm	Ball Bar Kinematic Scale Bar
Effective Diameter	(3 to 25.4) mm	1 μm	Test Sphere

Length-Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
Articulated Arm Coordinate Measurement Machine (AACMM):			ISO 10360-12:2016 6.2, 6.3, 6.4
Probing Size Error (PSize)	Sphere Diameter: 25.4 mm	1 μm	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
Articulated Arm Coordinate Measurement Machine (AACMM):			B89.4.22-2004 and ISO 10360-12:2016
Single Point Articulation Performance	N/A ⁴	0.41 μm	Test Sphere
Articulated Arm Coordinate Measuring Machines (AACMM) with Optical Distance Sensors:			Based on ISO 10360-08:2013 Annex D
Articulated Location Value	Sphere Diameter: 50.8 mm	4.4 μm	Test Sphere
FARO 3D Imager (Optical 3D Measuring Systems)	Ball Bar Distance ³ : 220 mm (FOV: 500 mm)	0.77 μm	VDI/VDE 2634 Part 2: Ball Bars
	Ball Bar Distance ³ : 120 mm (FOV: 250 mm)	0.54 μm	
Faro Laser Tracker: Ranging Length Measurement	(0.04 to 25) m	(2 + 0.4L) μm	ASME B89.4.19-2006: Reference Laser Tracker

Length-Dimensional Metrology

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-) ²	Reference Standard, Method, and/or Equipment
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
Faro Laser Tracker: Orientation Error of Six-DOF Probe	(2.5 to 10) m	2 μm	ISO 10360-10:2016
Laser Line Probe (LLP): Diameter	Cylinder Diameter: 25.4 mm	1.8 μm	Internal Procedure: Reference Cylinder
Z Distance/Position	(75 to 360) mm	1.5 μm	Calibrated distance/ Position by Laser Interferometer

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. FOV = Field of View.
4. Point measurements do not have a range.
5. This scope is formatted as part of a single document including Certificate of Accreditation No. L1147.09-1.



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