



PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

Haven Metrology Service
13694 172nd Avenue, Grand Haven, MI 49417

(Hereinafter called the Organization) and hereby declares that Organization 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 (as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Dimensional Calibration
(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President

Initial Accreditation Date:

June 27, 2010

Issue Date:

June 29, 2020

Expiration Date:

October 31, 2022

Accreditation No.:

67643

Certificate No.:

L20-369

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjlab.com



Certificate of Accreditation: Supplement

Haven Metrology Service

13694 172nd Avenue, Grand Haven, MI 49417
Contact Name: Jack Feddema Phone: 616-607-8095

Accreditation is granted to the facility to perform the following calibrations:

Dimensional

MEASURED INSTRUMENT, QUANTITY OR GAUGE	RANGE OR NOMINAL DEVICE SIZE AS APPROPRIATE	CALIBRATION AND MEASUREMENT CAPABILITY EXPRESSED AS AN UNCERTAINTY (\pm)	CALIBRATION EQUIPMENT AND REFERENCE STANDARDS USED
Customer Supplied Fixtures & Gages ^F	X = 700 mm Y = 1 000 mm Z = 700 mm	(16.59 + 0.039L) μ m	Contact CMM Zeiss Brown & Sharp Sheffield
	X= 1 500 mm Y= 2 800 mm Z= 1 400 mm	(38.38 + 0.043L) μ m	Global GPG 41
	X= 1 500 mm Y= 600 mm Z= 300 mm	(9.01+ 0.027L) μ m	Optical CMM: Hexagon Optiv GPG 41
Customer Supplied Fixture and Gages ^{FO}	Radius 1 800 mm	(40.99+ 0.045L) μ m	Articulated Arm: Faro Quantum S GPG 41
	Volume 75 mm ³ to 600 mm ³	(6.79 + 0.013L) μ m (21.66 + .027L) μ m	Non-Contact Structured Light Systems: Zeiss Comet L3D GPG 41
	Up to 0.1524 m	(29.19 + 0.501L) μ m	Micrometers GPG 40

1. The CMC (Calibration and Measurement Capability) stated for calibrations included on this scope of accreditation represents the smallest measurement uncertainty attainable by the laboratory when performing a more or less routine calibration of a nearly ideal device under nearly ideal conditions. It is typically expressed at a confidence level of 95 % using a coverage factor *k* (usually equal to 2). The actual measurement uncertainty associated with a specific calibration performed by the laboratory will typically be larger than the CMC for the same calibration since capability and performance of the device being calibrated and the conditions related to the calibration may reasonably be expected to deviate from ideal to some degree.
2. The laboratories range of calibration capability for all disciplines for which they are accredited is the interval from the smallest calibrated standard to the largest calibrated standard used in performing the calibration. The low end of this range must be an attainable value for which the laboratory has or has access to the standard referenced. Verification of an indicated value of zero in the absence of a standard is common practice in the procedure for many calibrations but by its definition it does not constitute calibration of zero capacity.
3. The presence of a superscript F means that the laboratory performs calibration of the indicated parameter at its fixed location. Example: Outside Micrometer^F would mean that the laboratory performs this calibration at its fixed location.
4. The term L represents length inches or millimeters as appropriate to the uncertainty statement.