



# Certificate of Accreditation: Supplement

## Roberts Metrology Services, LLC

12411 West Stark Street, Butler, WI 53007

Contact Name: David Roberts Phone: 262-781-8300

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
CMM <sup>F</sup>	Linear: Up to 60 in Bi-directional Accuracy Volumetric: Up to 36 in Repeatability	(1.5 + 5.4L) $\mu$ in 51 $\mu$ in 130 $\mu$ in 52 $\mu$ in	ASME B89.4.4-1997 Sections 5.3, 5.4.2, 5.5.2, 5.6 using Step Gage and Ball Bar
CMM <sup>F</sup>	Linear: Up to 60 in Bi-directional Accuracy Volumetric: Up to 36 in Repeatability	(1.5 + 5.4L) $\mu$ in 51 $\mu$ in 130 $\mu$ in 52 $\mu$ in	ASME B89.4.4-1997 Sections 5.3, 5.4.2, 5.5.2, 5.6 using Renishaw Laser, Step Gage and Ball Bar
Single Axis Instruments <sup>F</sup>	Up to 60 in Up to 120 in	(1.8 + 5.4L) $\mu$ in (6.6 + 1.3L) $\mu$ in	Step Gage Renishaw Laser
Dual Axis Instruments X, Y Axes- Length <sup>F</sup>	X, Y: Up to 60 in X, Y: Up to 120 in	(1.8 + 5.4L) $\mu$ in (6.6 + 1.3L) $\mu$ in	Step Gage Renishaw Laser
Optical Comparators X, Y Axes- Length <sup>F</sup>	X, Y: Up to 12 in Magnification	220 $\mu$ in 460 $\mu$ in	Glass Scale Gage Balls
Dimensional Testing-3D Length <sup>F</sup>	X, Z: Up to 37 in Y: Up to 76 in	160 $\mu$ 330 $\mu$	Blue Print or Customer Specification using DEA Iota CMM
Dimensional Testing-2D <sup>F</sup>	X, Y: Up to 6 in	160 $\mu$ in	Blue Print Customer Specification using Mitutoyo Optical Comparator

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<sup>F</sup> would mean that the laboratory performs this calibration at its fixed location.