

Calibration Scope of Accreditation ISO/IEC 17025:2005

Certificate Number: C1009.03

Midwest CMM Services

733-Q Crown Industrial Court

Chesterfield, MO 63005

Parameter / Equipment	Range	Best Measurement Uncertainty	Remarks
Coordinate Measuring Machines (CMMs)³			
Linear Displacement ³	(0-30 meters)	(0.23+0.19L) μm	Renishaw ML10 Laser Per ASME b89.4.1-1997-Sec 5.4.3
Linear Displacement ³	(0-2.5 meters)	1.91 x L +.127 (μm)	Starrett RBCM-650 Per ASME b89.4.1-1997-Sec 5.4.3
Linear Displacement ³	(8", 12")	+/- 40μin	Mitutoyo Gage Blocks Per ASME b89.4.1-1997-Sec 5.4.3
Volumetric Performance ³	Ballbar Lengths (4.0" through 24.0")	+/- (R*64L)μin	Per ASME b89.4.1-1997-Sec 5.5.2 Using Ballbar L= length of ballbar
Repeatability ³	Calibrated Ref. Sphere (1.0000")	+/- 40μin	Per ASME b89.4.1-1997-Sec 5.3.3 Using calibrated master sphere

Notes:

- 1) This laboratory offers commercial on-site calibration service.
- 2) Best Uncertainties represent expanded uncertainties using a coverage factor of k=2 which provides a level of confidence of approximately 95%.
- 3) On-site service is available for this parameter.

Disclaimer: The uncertainties achievable on a customer's site can normally be expected to be larger than the Best Measurement Capabilities (BMC) that the accredited laboratory has been assigned. Allowances must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the calibration uncertainty being larger than the BMC.