

Calibration Scope of Accreditation ISO/IEC 17025

Certificate Number F1002.04

**CMM Services, Inc.
Cambridge, Ontario, Canada**

Parameter/Equipment	Range	Best Measurement Uncertainty	Remarks
Coordinate Measuring Machines (CMM's)³			
Linear Displacement³	(0-80 Metres Renishaw ML10X)	(0.23+0.19L)µm	Per ASME B89.4.1-1997- Sec 5.5.2-using Laser Interferometer
	1-19 inches	±.0001in.	Starrett Step Gauge
Volumetric Performance³	Ballbar lengths (450-800 mm)	±(R×64L)µin	Per ASME B89.4.1-1997- Sec 5.5.2-Using Ballbar L=length of ballbar
Repeatability³	Calibrated 1 inch dia. Sphere	±40µin.	Per ASME B89.4.1-1997- Sec 5.3.3-Using calibrated master sphere

Notes:

- 1) This laboratory offers commercial 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 time 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.