



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Morgan Precision Instruments

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CALIBRATION and TESTING

Valid to: January 23, 2013

Certificate Number: ACT-1367

I. Dimensional Calibration

Table with 5 columns: PARAMETER / EQUIPMENT, RANGE, CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)], REFERENCE STANDARD OR EQUIPMENT, METHOD(S). Rows include Angle Blocks, Squares, Feeler Gages, Outside Diameter, Micrometer Standards, Inside Micrometers, Bar Gages, Micrometers (0.001 Resolution), Micrometers (0.0001 Resolution), Micrometers (0.00005 Resolution), and Depth Micrometers (0.001 Resolution).



PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Electronic Depth Micrometers (0.0001 Resolution)	Up to 12 in	(122 + 10.6L) μin	Grade II Gage Blocks Granite Surface Plate	QP5.4-7 Rev.4
Electronic Depth Micrometers (0.00005 Resolution)	Up to 6 in	125 μin	Grade II Gage Blocks Granite Surface Plate	QP5.4-7 Rev.4
Dial Calipers, Vernier Calipers, Depth Gages (0.001 Resolution)	Up to 120 in	(1052 + 10.6L) μin	Grade II Gage Blocks Granite Surface Plate	QP5.4-16 Rev.3
Digital Calipers and Depth Gages (0.0005 Resolution)	Up to 60 in	(521 + 10.6L) μin	Grade II Gage Blocks Granite Surface Plate	QP5.4-16 Rev.3
Height Gages (0.001 Resolution)	Up to 40 in	(1095 + 7.4L) μin	Grade II Gage Blocks Granite Surface Plate	QP5.4-4 Rev.2
Digital Height Gages (0.0005 Resolution)	Up to 40 in	(400 + 14.3L) μin	Grade II Gage Blocks Granite Surface Plate	QP5.4-4 Rev.2
Digital Height Gages (0.0001 Resolution)	Up to 24 in	(92 + 14.2L) μin	Grade II Gage Blocks Granite Surface Plate	QP5.4-4 Rev.2
Dial Indicators (0.001 Resolution)	Up to 4 in	0.0012 in	Grade II Gage Blocks Granite Surface Plate	QP5.4-5 Rev.4
Dial Indicators (0.0005 Resolution)	Up to 1 in	580 μin	Grade II Gage Blocks Granite Surface Plate	QP5.4-5 Rev.4
Dial Indicators (0.0001 Resolution)	Up to 1 in	120 μin	Grade II Gage Blocks Granite Surface Plate	QP5.4-5 Rev.4
Electronic Indicators (0.00005 Resolution)	Up to 1 in	65 μin	Grade II Gage Blocks Granite Surface Plate	QP5.4-5 Rev.4
Test Indicator (0.001 Resolution)	Up to 0.06 in	0.0012 in	Grade II Gage Blocks Granite Surface Plate Or Heightmaster	QP5.4-5 Rev.4
Test Indicator (0.0005 Resolution)	Up to 0.06 in	580 μin	Grade II Gage Blocks Granite Surface Plate Or Heightmaster	QP5.4-5 Rev.4
Test Indicator (.0001 Resolution)	Up to 0.06 in.	145 μin	Gage II Gage Blocks Granite Surface Plate Or Heightmaster	
Precision Levels	Up to 72 in	7.14 % x resolution	Granite Surface Plate	QP5.4-20 Rev.1



PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Surface Roughness	(1 to 250) µin	5 µin	Surftest and Reference Specimen	QP5.4-21 Rev.1
Sliding Gages (Profiles)	(3 to 60) in	557 µin	TRA Masters	QP5.4-15 Rev.2
Mandrels	(3 to 54) in	0.0014 in	Pi Tape	QP5.4-14 Rev.2
ID Base Bands	(3 to 54) in	0.0014 in	Pi Tape	QP5.4-18 Rev.2
Flat Tapes	(3 to 54) in	0.0019 in	Vernier Caliper	QP5.4-18 Rev.2
Tapes, Rules and Scales	Up to 40 in	0.0026 in	Vernier Caliper	QP5.4-19 Rev.1
Templates, Contour and Tolerance Gages	(3 to 48) in	890 µin	Measuring Machine	QP5.4-13 Rev.2

II. Dimensional Inspection

PARAMETER / EQUIPMENT	RANGE	CALIBRATION AND MEASUREMENT CAPABILITY [EXPRESSED AS UNCERTAINTY(±)]	REFERENCE STANDARD OR EQUIPMENT	METHOD(S)
Dimensional Inspection CMM 3D	X = Up to 40 in Y = Up to 80 in Z = Up to 40 in	(150 + 15L) µin	Coordinate Measuring Machine Used as Reference Standard	Dimensional Inspection

Notes:

1. Calibration and Measurement Capabilities (Expanded Uncertainties) are based on approximately a 95% confidence interval, using a coverage of $k=2$.
2. The use of (L) represents length in inches.
3. This scope is part of and must be included with the Certificate of Accreditation No. ACT-1367.



Vice President

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