

# Calibration Certificate



CALIBRATION #: 39323 PAGE 1 OF 2  
 TEMP 70° HUMIDITY 40%

For details of service, repair and adjustment, see  
 WO # 39323  
 Calibration Results:  
 Maximum recorded deviation from nominal:  
.0002  
 Calibration Interval  
12 Months

**CMM Calibrated**  
 COMPANY ABC Company Inc. MFG. Mitutoyo  
 ADDRESS 123 Main Street MODEL # BH-305  
 CITY Grand Rapids STATE MI ZIP 49507 SIZE X 12 Y 20 Z 12  
 PHONE 616-455-6879 FAX \_\_\_\_\_ S/N 92030203

This CMM has been calibrated based on the appropriate parts of the following specifications: ISO/IEC 17025, ASME B89.4, ISO 10012 and the former MIL STD 45662A. Calibration was performed using written procedures developed by CMM Technology, Inc. (CMMT-27.1 CMM Calibration Procedures©). The uncertainty of measurement involved in the calibration process comprises many components. It represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2. This certification shall not be reproduced except in full, without the written approval of CMM Technology, Inc. The calibration results recorded on this certificate apply only to the CMM listed above. Calibration is traceable to the SI through NIST by documents on file at CMM Technology, Inc.

Linear data corrected to 20°C  yes  no, per customer request

		ACCURACY	DISTANCE 1 at 45°	DISTANCE 2 at 135°
SQUARENESS	XY	.0001	9.5001	9.5000
	ZX	.0001	9.5001	9.5000
	ZY	.0001	9.5000	9.4999

ALL READINGS .XXXX" 1 = .0001" 2 = .0002" 3 = .0003"

		0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"	12"
SQUARENESS	POSITION:	0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"	12"
	X Axis	0	1	1	1	0	0	1	0	0	0	0	1	0
	POSITION:	—	—	—	—	—	—	—	—	—	—	—	—	—
LINEAR ACCURACY	POSITION:	0"	2"	4"	6"	8"	10"	12"	14"	16"	18"	20"	—	—
	Y Axis	0	0	0	0	1	1	1	1	1	2	2	—	—
	POSITION:	—	—	—	—	—	—	—	—	—	—	—	—	—
LINEAR ACCURACY	POSITION:	0"	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"	12"
	Z Axis	0	0	1	1	-1	-1	-1	0	0	0	0	1	1
	POSITION:	—	—	—	—	—	—	—	—	—	—	—	—	—

**LINEAR DISPLACEMENT ACCURACY**  
 Uncertainty \_\_\_\_\_

Current Displacement Error	Axis	Before Adjustment Displacement Error
<u>1</u>	<u>X</u>	<u>1</u>
<u>2</u>	<u>Y</u>	<u>3</u>
<u>2</u>	<u>Z</u>	<u>2</u>

**SQUARENESS ACCURACY**  
 Uncertainty \_\_\_\_\_

Current Squareness Error	Axis	Before Adjustment Squareness Error
<u>1</u>	<u>XY</u>	<u>3</u>
<u>1</u>	<u>ZX</u>	<u>1</u>
<u>1</u>	<u>ZY</u>	<u>2</u>

**MEASURING REPEATABILITY**  
 Uncertainty \_\_\_\_\_

Current Repeatability	Axis	Before Adjustment Repeatability
<u>1</u>	<u>X</u>	<u>1</u>
<u>1</u>	<u>Y</u>	<u>2</u>
<u>1</u>	<u>Z</u>	<u>1</u>

Calibrated by and responsible for ensuring the correctness of this recorded information.

John Doe  
 Service Engineer

Date issued:

6/1/2020

Date calibrated:

6/1/2020

Next calibration due on:

6/1/2021

**EQUIPMENT USED FOR CALIBRATION**

DESCRIPTION	MANUFACTURER	SERIAL NUMBER	NIST TRACEABILITY NIST NUMBER	TEST DATE	DUE DATE
Checkmaster	Mitutoyo	500325	821/268344-06	12/ 1 / 19	12/ 1 / 20
Ball Bar	Bal-Tec	000426,000452	821/266717-06	12/ 1 / 19	12/ 1 / 21
Temp/Humid Gage	Cooper Standard	0168	821/296445-06	12/ 1 / 19	12/ 1 / 21
				/ /	/ /
				/ /	/ /



**Volumetric Performance Calibration Certificate**

CALIBRATION # 39323 PAGE 2 OF 2

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ADDRESS 123 Main Street MODEL # BH-305

CITY Grand Rapids STATE MI ZIP 49507 SIZE X 12 Y 20 Z 12

PHONE 616-455-6879 FAX 616-455-6880 S/N 92030203

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Uncertainty	<u>.00025</u>
Before Total Volumetric	<u>.00025</u>
Current Total volumetric	<u>9.50000</u>
Basic Ball Bar Length	<u>-.00015</u>
Pos. 1 Deviation	<u>-.00010</u>
Pos. 2 Deviation	<u>-.00015</u>
Pos. 3 Deviation	<u>0</u>
Pos. 4 Deviation	<u>-.00005</u>
Pos. 5 Deviation	<u>.00005</u>
Pos. 6 Deviation	<u>.00010</u>
Pos. 7 Deviation	<u>.00002</u>
Pos. 8 Deviation	<u>.00010</u>
Pos. 9 Deviation	<u>.00005</u>
Pos. 10 Deviation	<u>-.00010</u>
Pos. 11 Deviation	<u>-.00012</u>
Pos. 12 Deviation	<u>-.00010</u>
Pos. 13 Deviation	<u>.00005</u>
Pos. 14 Deviation	<u>.00010</u>
Pos. 15 Deviation	<u>0</u>
Pos. 16 Deviation	<u>0</u>
Pos. 17 Deviation	<u>.00010</u>
Pos. 18 Deviation	<u>-.00005</u>
Pos. 19 Deviation	<u>-.00007</u>
Pos. 20 Deviation	<u>-.00002</u>
Pos. 21 Deviation	<u>_____</u>
Pos. 22 Deviation	<u>_____</u>
Pos. 23 Deviation	<u>_____</u>
Pos. 24 Deviation	<u>_____</u>
Pos. 25 Deviation	<u>_____</u>
Pos. 26 Deviation	<u>_____</u>
Pos. 27 Deviation	<u>_____</u>
Pos. 28 Deviation	<u>_____</u>
Pos. 29 Deviation	<u>_____</u>
Pos. 30 Deviation	<u>_____</u>
Pos. 31 Deviation	<u>_____</u>
Pos. 32 Deviation	<u>_____</u>
Pos. 33 Deviation	<u>_____</u>
Pos. 34 Deviation	<u>_____</u>
Pos. 35 Deviation	<u>_____</u>

**BALL BAR TEST RESULTS**



