

# Caliber Gauges & Instruments Laboratory



S.No. 14/1, Datta Digambar Colony, B, Old Warje Jakat Naka, Pune - 411052.

☎ : 9422311121, 7741832553, E-mail: caliberlab@yahoo.co.in Web: www.caliberlaboratory.co.in

Certificate No.: CC2656

Page : 1 of 4

ULR NO:CC265621000002655F

Certificate No.: CGIL / 2021 / 0303 / D - 001

## Calibration Certificate

TRUE COPY

**CALIBRATED FOR :** National Centre For Quality Calibration.  
House No. 4, Abhishree Corporate Park, Nr. Swagat Bunglow  
BRTS, Iskcon-Ambli Road. Ambli,Ahmedabad-380058  
(Thr Octagon Precision (I) Pvt. Ltd.)

**TYPE OF EQUIPMENT :** Length Measuring Machine

Range	Least Count	Identification	Make	Mfg. No	Model No
Horizontal Axis: 0-100mm	0.0001mm	NCQC/M-24	Octagon	50	LMM300T
Vertical Axis:0-80 mm					

P.O.NO.	Work Order No	Date of receipt	Date of calibration	Due date	Issue Date
--	0303/D	03.03.2021	03.03.2021	02.03.2023	04.03.2021

Standards / Equipment are traceable to the National Standard

Equipment	Sr. No.	Certificate No.	Valid Up to
Laser Head Make - Renishaw ,Model - XL-80	950E11	111-20882	24.01.2025

**Mechanical Calibration: Dimension (Precision)**

**CALIBRATION PROCEDURE NO.** : To obtain equipment error of measurement at number of points in total range by comparison of indicated value on Length Measuring machine with Laser Interferometer ( CGIL-CP-33)

**EQUIPMENT DETAILS** :Accuracy of equipment - 0.5 ppm Least count - 0.000001 mm  
Range - 40 m

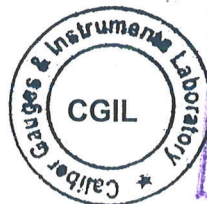
**UNCERTAINTY OF MEASUREMENT** :  $\pm 0.08 + 0.83 L \mu\text{m}$  (L in meter)

The reported uncertainty is at coverage probability of approximately 95.45 % i.e.k=2.

**Calibrated By**

**Approved By**

NCQC System Certificate No. 226

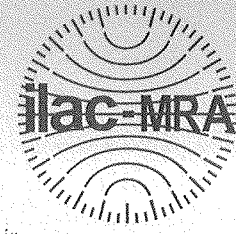


NCQC  
Valid up to 02-03-2023  
Reviewed

Laboratory Manager  
(Santosh Raskar)

1. This Certificate pertains only to the items calibrated by CGIL Laboratory at site.
2. No. report should be reproduced without prior permission.
3. The result produced in this certificate are valid under stated conditions at the time of calibration

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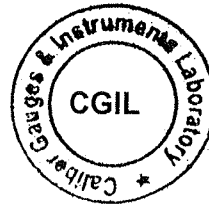
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### Parameter Maintain during Calibration

1	Calibration Interval	: As per customer requirement
2	Feed rate during calibration	: Manual
3	D.R.O	: Software
4	Sr. No. of D.R.O	: NA
5	Optics Mounted On	: Measuring Arm and Table
6	Air temprature at start	: 19.40°C
7	Air temprature at end	: 19.80°C
8	Material temprature at start	: 19.75°C
9	Material temprature at end	: 20.13°C
10	Environmental Condition	: 20 ± 2°C
11	Coefficient of Expansion	: Horizontal Axis: 11.5 x 10 <sup>-6</sup> µm/°c : Vertical Axis : 11.5 x 10 <sup>-6</sup> µm/°c
12	Auto Compensation EC-10	: Automatic
13	Condition of Equipment	: Ok
14	Accuracy of Unit	: 0.5 ppm
15	Capacity of Equipment	: 0-300 mm
16	Calibration Site Address	National Centre For Quality Calibration. Ahemdabad-380058
17	Location	Mechanical(Dimension)

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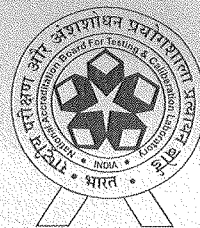
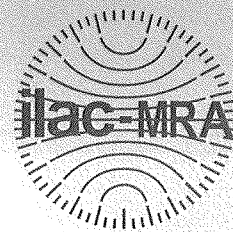


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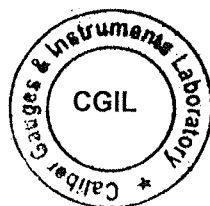
Range	Least Count	Identification	Make	Sr. No
0-100 mm	0.0001 mm	NCQC/M-24	Octagon	50

## Calibration Result

### Horizontal Axis

Sr. No.	Nominal Reading Length Measuring Machine (in mm)	Mean Error (in $\mu\text{m}$ )
1	0.0000	0.00
2	0.5000	0.02
3	1.0000	-0.08
4	5.0000	-0.09
5	10.0000	0.01
6	20.0000	-0.29
7	30.0000	0.01
8	40.0000	-0.13
9	50.0000	-0.31
10	60.0000	-0.03
11	70.0000	-0.36
12	80.0000	-0.33
13	90.0000	-0.49
14	100.0000	-0.22

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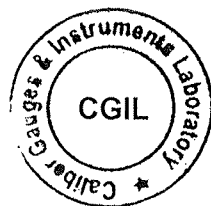
Range	Least Count	Identification	Make	Sr. No
0-80 mm	0.0001 mm	NCQC/M-24	Octagon	50

## Calibration Result

### Vertical Axis

Sr. No.	Nominal Reading Length Measuring Machine (in mm)	Mean Error (in $\mu$ m)
1	0.0000	0.00
2	0.5000	0.25
3	1.0000	0.33
4	5.0000	0.27
5	10.0000	0.39
6	20.0000	0.38
7	30.0000	0.58
8	40.0000	0.12
9	50.0000	0.01
10	60.0000	0.01
11	70.0000	-0.40
12	80.0000	-0.16

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