

CERTIFICATE OF CALIBRATION

ISSUED BY

Om ENGINEERS Metrology Pvt Ltd

"Madhu Smruti", First Floor, S. No. 37/2, Plot No 2 Next to Sai services,

Sinhagad Road, Vadgaon Kh, Pune - 411041.

Tel. No. +91 7219710106, Cell No. +91 9822910106

E-Mail ID : pune_omengineers@rediffmail.com



CC-2751

TRUE COPY

Issued On **03/03/2025** ULR No **CC275125000002553F**

Certificate No	Date of Receipt	Date of Calibration	Next Date of Calibration	Page	No. of Pages
OM / 46 / 240071	03/03/2025	03/03/2025	03/03/2027	1	4

Name of Customer & Address

: **M/s. NCQC Laboratory LLP**

4, Abhishree Corporate Park,, Near Swagat Bungalow BRTS,, ISKCON-Ambli Road, Ambli, Ahmedabad, Gujarat 380058

(Through - M/s. Octagon Precision (India) Pvt. Ltd., Pune)

Purchase Order No.	Date	Challan No.	Date	Work Order No	Condition of Item
Nil	Nil	Letter	03/03/2025	OM/CAL/2425/2669	OK

GAUGE FOR CALIBRATION

: **Length Measuring Machine**

Make

: Octagon

Model No : LMM300T

Range / L.C.

: Horizontal Axis : 0-100mm / 0.0001, Vertical Axis : 0-80mm / 0.0001mm

Identification No.

: NCQC/M-24

Sr. No.

: 050

Calibration Procedure No.

: CM 46

Reference Document No.

: Comparison Method

CALIBRATION PROCEDURE

: To obtain the linear accuracy of Length Measuring Machine at various points of total range by comparison with Laser Interferometer.

Equipment & Master Used for Calibration

Used Standards are traceable to National / International Standards (Direct / through NABL Accredited Lab.)

Equipment & Master Used for Calibration	Identification No.	Sr.No.	Calibration Certificate No	Calibration Date	Valid up to	Traceability With
Laser Interferometer	OM - E 22 - 01	1VQP30	111-25109	03.05.2023	03.05.2026	Federal Institute of Metrology METAS, Switzerland

UNCERTAINTY OF MEASUREMENT

: $\pm 0.08 + 0.3 L \mu m$ (L in meter)

The uncertainty stated is the expanded uncertainty of measurement obtained by multiplying the standard uncertainty by the coverage factor k=2 correspondes to confidence level of 95.45%.

NOTE :1) Calibration Results are given on Page No. 2 onwards.

NCQC System Certificate No. 225

Jaywant Hode

Deputy Technical Manager

Calibrated By



NCQC LABORATORY LLP

Valid up to 03/03/2027

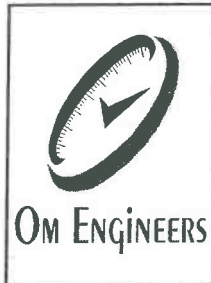
Reviewed Mges

Ajay Gajare

Technical Manager

Authorized Signatory

- This certificate refers only to the particular item(s) submitted for calibration .
- This certificate shall not be reproduced, except in full, unless written permission of M/s.Om Engineers Metrology Pvt Ltd, Pune.
- The Calibration results reported in this certificate are valid at the time of an under the stated conditions of measurement.



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Length Measuring Machine

Make Octagon

Identification No. NCQC/M-24

Sr.No. 050

Range / L.C. Horizontal Axis : 0-100mm / 0.0001, Vertical Axis : 0-80mm / 0.0001mm

Parameter Maintained during Calibration ;

1	Air temperature at start	20.02 °C
2	Air temperature at end	20.03 °C
3	Material temperature at start	20.27 °C
4	Material temperature at end	20.28 °C
5	Co-efficient of Expansion	Horizontal & Vertical Axis : $11.5 \times 10^{-6} \mu\text{m} / ^\circ\text{C}$
6	Environmental Condition	$20 \pm 2 ^\circ\text{C}$
7	Compensation	Automatic
8	Condition Equipment	Ok
9	Accuracy of Laser Interferometer	0.5 ppm
10	Capacity of LMM	0 - 300 mm
11	Calibration site address	M/s. NCQC Laboratory LLP 4, Abhishree Corporate Park,, Near Swagat Bungalow BRTS,, ISKCON- Ambli Road, Ambli, Ahmedabad, Gujarat 380058
12	Location / Department	Mechanical (Dimension)
13	Calibration Point	As per customer requirement
14	Dwell time at each target position	Manual
15	Soaking Time	Three Hours.
16	Feed rate during calibration	Manual
17	D.R.O	Software
18	Sr. No. of D.R.O.	--
19	Compensation Factor	--

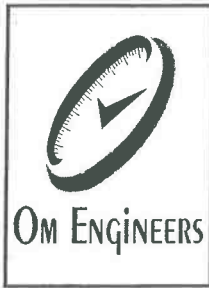


Jaywant Hode
Deputy Technical Manager

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CONTD. PAGE 3
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Length Measuring Machine

Make Octagon Identification No. NCQC/M-24 Sr.No. 050
Range Horizontal Axis : 0-100mm / 0.0001, Vertical Axis : 0-80mm / 0.0001mm

NABL 120 2.3.4 Mechanical Discipline : Dimensions (Precision - Precision Instruments)

Calibration Results

Horizontal Axis ;

Reading on Length Measuring Machine (mm)	Observed Reading on Laser Interferometer (mm)	Observed Error (μ m)
0.00	0.00000 Set	0.00
0.50	0.49998	+0.02
1.00	0.99996	+0.04
5.00	4.99987	+0.13
10.00	9.99981	+0.19
20.00	19.99975	+0.25
30.00	29.99979	+0.21
40.00	39.99976	+0.24
50.00	49.99978	+0.22
60.00	60.00001	-0.01
70.00	70.00001	-0.01
80.00	80.00001	-0.01
90.00	90.00006	-0.06
100.00	100.00004	-0.04

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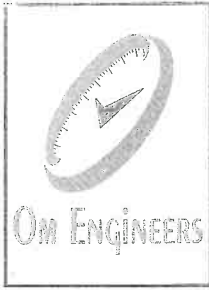


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Identification No. NCQC/M-24

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Range Horizontal Axis : 0-100mm / 0.0001, Vertical Axis : 0-80mm / 0.0001mm

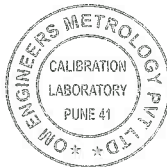
NABL 120 2.3.4 Mechanical Discipline : Dimensions (Precision - Precision Instruments)

Calibration Results

Vertical Axis ;

Reading on Length Measuring Machine (mm)	Observed Reading on Laser Interferometer (mm)	Observed Error (μ m)
0.00	0.00000 Set	0.00
0.50	0.49986	+0.14
1.00	0.99976	+0.24
5.00	4.99972	+0.28
10.00	9.99987	+0.13
20.00	19.99970	+0.30
30.00	29.99979	+0.21
40.00	39.99979	+0.21
50.00	50.00012	-0.12
60.00	60.00012	-0.12
70.00	70.00004	-0.04
80.00	80.00009	-0.09

** End of Certificate **



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