

# Measurement to Perfection ...



# 100, West Park Road (Between Sampige and Margosa Road) 10th Cross, Malleshwaram, Bengaluru - 560 003



## CALIBRATION CERTIFICATE

Customer Name & Add.: M/s.

NCQC Laboratry LLP

4, Abhishree Corporate Park, Near Swagat Bungalow BRTS, Iskcon-Ambli Road,

Ahmedabad-380058

SRF No.: TSC/25-26/5459

Dated: 16 Jun 2025

Cert.Issued Date:

19 Jun 2025

ULR.NO CC223125000068322F

| Calibration Certificate Number | Calibrated Date | Calibration Due Date | Page Number |
|--------------------------------|-----------------|----------------------|-------------|
| TSC/25-26/5459-1               | 16 Jun 2025     | 15 Jun 2026          | 1 of 3      |

| Details of device under calibration |                                 | Transcal ID              | : TSC560374              |  |
|-------------------------------------|---------------------------------|--------------------------|--------------------------|--|
| Nomenclature                        | :Bench Center                   | No. of Pages             | :3                       |  |
| Make                                | :Micro-Flat                     | Cal Procedure No.        | : TSC/CAL/445            |  |
| Model/Range                         | :500 x 160 mm                   | DUC Received             | : 16 Jun 2025            |  |
| SI No.                              | :12785/2                        | DUC Condition on Receipt | : Satisfactory           |  |
| ID No.                              | :NCQC/M-206                     | Cal At                   | : Dimensional Lab Onsite |  |
| Calibrated By                       | :Sahana N, Calibration Engineer |                          |                          |  |

Environmental Conditions: Temperature in °C: 20.1

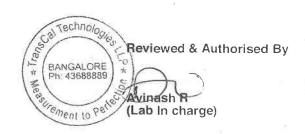
Humidity in RH %: 53.7

#### Standards used:

| SI No. | Nomenclature          | Make     | Model    | SI No/ID.No.           | Certificate No.                     | Validity    |
|--------|-----------------------|----------|----------|------------------------|-------------------------------------|-------------|
| 1      | Cylindrical Mandrel   | Aditya   | 30X300mm | 701-1-1                | 24/53/01/041-S/3/034-B              | 10 May 2026 |
| 2      | Cylindrical Mandrel   | Aditya   | 30X400mm | 701-1-2                | 24/53/01/041-S/3/034-C              | 10 May 2026 |
| 3      | Cylindrical Mandrel   | Aditya   | 30X500mm | 701-1-3                | 24/53/01/041-S/3/034-D              | 10 May 2026 |
| 4      | Taper Mandrel         |          | •        | TM-01, TM-02,<br>TM-03 | TSC/24-25/INH/MCAL-<br>139A to 139C | 18 Dec 2025 |
| 5      | Lever Type dial Gauge | Mitutoyo | NA       | CDZK33                 | TSC/24-25/INH/MCAL-<br>204-1        | 20 Aug 2025 |

NCQC LABORATORY LLP Valid up to 15-96-2026

NCQC System Certificate No. 40





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### Note:

- 1. This Calibration Certificate relates only to the above DUC & Reported results are valid at the time of and under the stated conditions of measurements.
- 2. Partial Publication/ reproduction of this Certificate in any form is not permitted without the written consent of TransCal Technologies LLP.
- 3. Errors if any, in this Certificate shall be brought to notice within 45 days from the date of this Certificate
- 4. Measurement Uncertainty reported is at approximately 95 % confidence level with k=2; Units of Measurement results & Measurement Uncertainty are same as that of range selected Unless otherwise indicated.
- 5. Calibration of the DUC is traceable to National/International Standards.
- 6. Corrections/erasing invalidate the Calibration Certificate.
- 7. Unless otherwise specified the Measurement Data reported is "As Found"-Without any adjustment.
- 8. The Decision Rule: No Conformity statement (Pass/FailAccept/Reject) provided

Reviewed & Authorised By

BANGALORE
Ph: 43688889

Avinash R

(Lab In charge)



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Results:-

Size: 500x160 mm

| SI. No. | Parameter   | Calibrated Values in mm |  |
|---------|---|-------------------------|--|
| 4       | Parallelism of the axis of center with respect to guideways | 0.003                   |  |
| 2       | Co-axiality of center                                       | 0.004                   |  |

## Conclusion / Remarks:

Measurement uncertainty of Parallelism is  $\pm$  4.5  $\mu m$  at 95% confidence level, with k=2 Measurement uncertainty for Co-axiality is  $\pm$  4.1  $\mu m$  at 95% Confidence level , with k= 2 Relevent Standard/Guidelines: IS 5980.

## Maximum Permissible error as per IS 5980-1978

| H mm           | Parallelism of the axis of center with respect to guideways    | · Co-axiality of center  |  |
|----------------|--|--|--|
| 125 and<br>160 | 0.01 mm/300 mm leaning towards the free<br>end of the mandrel  | 0.01 mm over any length of 300 mm, total<br>error of 0.015 mm, total error of 0.02 mm<br>for Emax greater than 500 mm          |  |
| 200 to<br>300  | 0.015 mm/300 mm leaning towards the free<br>end of the mandrel | 0.015 mm over any length of 300 mm. total error of 0.02 mm for Emax up to 500 mm. total error of 0.04 mm for Emax above 500 mm |  |

\*\*\* End Of Certificate \*\*\*

BANGALORE Ph: 43688889

Reviewed & Authorised By

Avinash R (Lab In charge)