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Calibration Certificate F/CR/M/032 Issue No. 02

Name of Customer National Centre for Quality Calibration 4, Abhishree Corporate Park, Nr. Swagat Bungalows BRTS, Iskcon – Ambli Road, Ambli, Ahmedabad – 380 058, Gujarat	Certificate No. NCQC-M/221223/008 Date of Issue 22/12/2023 Date of Calibration 22/12/2023 Suggested Due Date 21/12/2024	
Date of Receipt / Ref.No.: 22/12/2023		

ULR No. : CC21282300009434F **Discipline :** Mechanical Calibration
 (Precision Instruments and Surface Topology)

Details of Observation of Unit Under Calibration	Identification No. : NCQC/M-25 Serial No. : 33271 Name of Instrument : Profile Projector
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Range	X axis - 0 to 200 mm, Y axis - 0 to 100 mm	Initial Error	Nil
Resolution	0.001 mm	Visual Inspection	Satisfactory
Make / Model	Radical/RPP-3000 DR	Accuracy	As per Manual
Location		Type / Size	Digital

Loc. of Calibration	At Laboratory	Std. Ref. Used	JIS B 7184
Environment Cond.	20 ± 2 °C, 40% To 60% Rh	Cali.Method No.	NCQC/CM/M/032
Actual Env. Cond.	20.6 °C 52.7 %Rh		

Master Instruments Detail

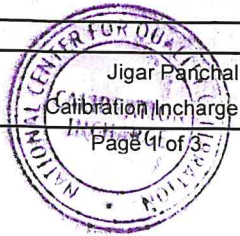
NCQC SYS.NO.	Nomenclature	Make/ Model	Id / Serial No.	Traceable To	Certificate No.	Valid Upto
287	Graduated Glass Scale	Graticules / =====	NCQC/M-130 / LG300-02	CC-2656	CGIL/2023/0531/F-001	02/06/2025
291	Angular Scale	=== / ===	NCQC/M-131 / AG-29	CC-2656	CGIL/2023/0906/K-001	06/09/2025
216/1	Graduated Glass Scale	===/===	NCQC/M-115/===	CC-2656	CGIL/2023/0531/F-003	02/06/2025
286	Digital Caliper	Baker / ===	NCQC/M-137 / 170691035	CC-2128	NCQC-M/191223/002	18/12/2024

Calibration Results (Linear X Axis)

Standard Readings in mm	Reading Observer by UUC in mm	Error in mm	Expanded Uncertainty in µm (k =2) ±
0.0	0.000	0.000	===
2.0	2.000	0.000	4.9
5.0	4.999	-0.001	4.9
10.0	9.999	-0.001	4.9
25.0	25.000	0.000	4.9
50.0	50.001	0.001	4.9
75.0	75.001	0.001	4.9
100.0	100.001	0.001	4.9
150.0	150.001	0.001	4.9
175.0	175.001	0.001	4.9
200.0	200.002	0.002	4.9

Traceable To National / International Standards

Calibrated By Maulik Rathod Calibration Engineer	Reviewed & Approved By <i>[Signature]</i>	Jigar Panchal Calibration Incharge
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NCQC System Certificate No. *[Handwritten]*

NCQC System Certificate No. **42**

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ULR No. : CC212823000009434F **Discipline :** Mechanical Calibration
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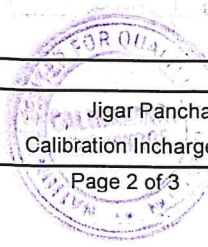
Calibration Results (Linear Y Axis)

Standard Readings in mm	Reading Observer by UUC in mm	Error in mm	Expanded Uncertainty in μm ($k=2$) \pm
0.0	0.000	0.000	===
2.0	2.000	0.000	4.9
5.0	5.000	0.000	4.9
10.0	10.001	0.001	4.9
15.0	15.001	0.001	4.9
25.0	25.002	0.002	4.9
50.0	50.002	0.002	4.9
75.0	75.003	0.003	4.9
100.0	100.004	0.004	4.9

Angular results

Standard Readings in $^{\circ}$	Reading Observer by UUC in $^{\circ}$	Error in $^{\circ}$	Expanded Uncertainty in min. Of arc ($k=2$) \pm
0	0.000	0.000	===
30	30.002	0.002	5.86
60	60.004	0.004	5.86
90	90.005	0.005	5.86
120	120.006	0.006	5.86
150	150.007	0.007	5.86
180	180.008	0.008	5.86
210	210.012	0.012	5.86
270	270.013	0.013	5.86
360	360.014	0.014	5.86

Traceable To National / International Standards.

Calibrated By JI Maulik Rathod Calibration Engineer	Reviewed & Approved By Jigar Panchal Calibration Incharge	 Page 2 of 3
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ULR No. : CC21282300009434F		Discipline : Mechanical Calibration (Precision Instruments and Surface Topology)			
Details of Observation of Unit Under Calibration		Identification No. : NCQC/M-25 Serial No. : 33271 Name of Instrument : Profile Projector			
Calibration Result (Magnification)					
Objective Magnification					
20 X, 50 X, 100 X					
Objective Magnification	Reading set on glass scale in mm	Reading Observed by Digital Caliper/Glass Scale in mm	Calculated Magnification	% Error	Expanded Uncertainty in % (k=2) ±
20 X	2.0	39.99	19.995	-0.02	0.41
50 X	1.0	50.00	50.000	0.00	0.41
100 X	0.5	50.00	100.000	0.00	0.41
Remarks: <ul style="list-style-type: none">• Averages of minimum five readings are reported.• Suggested due date is given based on customer requirements• These results are obtained at the time of calibration.• Result relates to the item calibrated only.• No external provider was used for calibration and hence it is not applicable.• Calibration certificate shall not be reproduced except in full without written approval of Director, NCQC.• Any hand written corrections (except @) or photocopies of the report invalidates this certificate.• The uncertainties are for a confidence probability of not less than 95% with coverage factor k = 2• Our masters are directly calibrated through NABL accredited calibration laboratory having direct traceability with National / international standard.					
Traceable To National / International Standards.					
Calibrated By Maulik Rathod Calibration Engineer		Reviewed & Approved By Jigar Panchal Calibration.Incharge			