



Since 1998

NATIONAL CENTRE FOR QUALITY CALIBRATION

4, Abhishree Corporate Park, Nr. Swagat Bungalows BRTS, Iskcon-Ambli Road, Ambli, Ahmedabad-380 058

Ph. +91-79-29795322, 29795323 • Fax : +91-79-29795323, Cell No. +91-9327017517, +91-9328616370

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Visit our Web Site : www.calibrationlaboratory.in



CC-2128

Precision Calibration with National / International Traceability for Temperature, Dimension, Pressure, Vacuum, Time, Mass, Electrical, Noise, Airflow, Lux & all Special Purpose Instruments in all ranges.

Calibration Certificate

F/CR/T/O 10/03 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-T/180223/008 | |
| | Date of Issue 20/02/2023 | |
| | Date of Calibration 18/02/2023 | |
| | Suggested Due Date 17/02/2024 | |
| Date of Receipt / Ref.No.: 16/02/2023 | | |

| | |
|-------------------------------------|---|
| ULR No. : CC212823000000737F | Discipline : Thermal Calibration Specific Heat and Humidity |
|-------------------------------------|---|

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|---|--|
| Details of Observation of Unit Under Calibration | Identification No. : NCQC/T – 170 Serial No. : EF7186H00545 Name of Instrument : Temperature & Humidity Data Logger |
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|---|---|
| Range 0 to 99 % Rh Resolution 0.1 % Rh Make / Model Elitech/RC-4HC Location Laboratory | Visual Inspection Accuracy OK $\pm 5\%$ Rh |
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| Loc. of Calibration At Laboratory Environment Cond. $25 \pm 4\text{ }^\circ\text{C}$, 30 to 75 % Rh | Std. Ref. Used Cali.Method No. NCQC/CM/T/010 |
|---|---|

Master Instruments Detail

| NCQC SYS.NO. | Nomenclature | Make/ Model | Id / Serial No. | Traceable To | Certificate No. | Valid Upto |
|--------------|---------------------------|--|---|--------------|-----------------|------------|
| 335 | Digital thermo Hygro Palm | Rotronic / HP32 | NCQC/T-161/ 5181935 / 20281776 | CC 2733 | 30056028 | 05/07/2023 |
| 435 | 4 wire RTD with Indicator | RTD - Tempsens / TPRT-100, Indicator - Tempsens / TEMPMET-09-02 | RTD-NCQC/T-235 / 23000299, Indicator - NCQC/T-236 / T0064 | CC-2840 | TL/022/1068.2.1 | 25/09/2023 |

Calibration Results of Humidity @ 25 °C

| Set point on Hybrid Temperature and Humidity Calibrator in % Rh | Reading observed by UUC in % Rh | Reading observed by Master instrument in % Rh | Absolute Error in % Rh | Expanded Uncertainty in % Rh (k=2) ± |
|---|---------------------------------|---|------------------------|--------------------------------------|
| 20.0 | 20.7 | 20.11 | 0.59 | 3.20 |
| 40.0 | 40.9 | 40.21 | 0.69 | 3.20 |
| 50.0 | 51.1 | 50.29 | 0.81 | 3.20 |
| 70.0 | 71.4 | 70.38 | 1.02 | 3.20 |
| 95.0 | 93.9 | 95.53 | 1.63 | 3.20 |

NCQC
 Valid up to 17-02-2024
 Reviewed: *[Signature]*

Traceable To National / International Standards.

| | |
|--|--|
| Calibrated By <i>[Signature]</i> Vishal Chauhan Calibration Engineer | Reviewed & Approved By <i>[Signature]</i> Jigar Panchal Calibration Incharge |
|--|--|

NCQC System Certificate No. 345



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TRUE CALIBRATION

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Calibration Certificate

FICRIT/10/03 Issue No. 02

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| | Date of Issue | 20/02/2023 |
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| | |
|-------------------------------------|---|
| ULR No. : CC212823000000737F | Discipline : Thermal Calibration Specific Heat and Humidity |
|-------------------------------------|---|

| | |
|---|--|
| Details of Observation of Unit Under Calibration | Identification No. : NCQC/T – 170 |
| | Serial No. : EF7186H00545 |
| | Name of Instrument : Temperature & Humidity Data Logger |

| | | | |
|--------------------|--------------|-----------------|---|
| Range | -30 to 60 °C | Accuracy | ± 0.5 °C up to - 20 to 40°C & Other ±1°C |
| Least Count | 0.1 °C | | |

Calibration Results of Temperature

| Set point on Hybrid Temperature and Humidity Calibrator in °C | Reading observed by UUC in °C | Reading observed by Master instrument in °C | Absolute Error in °C | Expanded Uncertainty in °C (k=2) ± |
|---|-------------------------------|---|----------------------|------------------------------------|
| -25.0 | -25.3 | -25.137 | 0.163 | 0.78 |
| -15.0 | -15.3 | -15.129 | 0.171 | 0.78 |
| 0.0 | 0.0 | 0.028 | 0.028 | 0.78 |
| 10.0 | 10.2 | 10.107 | 0.093 | 0.78 |
| 30.0 | 30.3 | 30.141 | 0.159 | 0.78 |
| 50.0 | 50.3 | 50.146 | 0.154 | 0.78 |

Remarks:

- Averages of minimum five readings are reported.
- Suggested due date is given based on customer requirements
- Calibration Points are given based on customer requirements.
- Condition of instrument found satisfactory during receipt.
- These results are obtained at the time of calibration.
- 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.
- Portable Hybrid temperature and Humidity calibrator was used as a source of generating temperature and humidity as well as controlling temperature at specified set point.

Traceable To National / International Standards.

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|----------------------|--|-----------------------------------|---------------------------------------|
| Calibrated By | Vishal Chauhan Calibration Engineer | Reviewed & Approved By | Jigar Panchal Calibration Incharge |
|----------------------|--|-----------------------------------|---------------------------------------|