



COMMITTED TO THE  
CUSTOMER SINCE - 1996

# Vaidyanatheshwara INSTRUMENTS

## CERTIFICATE OF CALIBRATION



CC-2473



No. 301/A, 9th Main Road, 3rd Cross, Rajiv Gandhi Nagar, J.B. Kaval, Nandhini Layout Post, Bangalore - 560 096.  
Ph : 080-23377266, Mob : 9986586789 / 9632221171 / 9964308118 | Email : info@viplgroup.com Web : www.viplgroup.com

NABL Accredited Calibration Lab as per ISO/IEC 17025 : 2017 With vide Certificate No: CC-2473

Page No: 1 of 2

### 1 Name and Address of the Customer

M/s: MAG ENGINEERING  
46 A 3rd Main 2nd Phase, Peenya,  
Bangalore-560 058

### 2 Customer Reference

2.1 ULR No. : CC247323100008281F  
2.2 SRF No. : 8113  
2.3 Certificate No. : VI/22-23/8113-06  
2.4 VI Format No. : VI-FRM-ME-010  
2.5 Dc.No & Dc Date : SIA/RGP 21-22/0351&28-02-2023  
2.6 Date of Receipt : 01-03-2023  
2.7 Date of Issue : 03-03-2023

### 3 Details Of Device Under Calibration(DUC).

3.1 Nomenclature : Torque Wrench  
3.2 Make & Model : Torque Master & TM-160  
3.3 SI.No. : MS-15  
3.4 Range & Least Count : 50-220Nm/5Nm  
3.5 Calibration Procedure No. : SOP-16-08  
3.6 No.of Pages : 2  
3.7 Calibration Date : 03-03-2023  
3.8 Calibration Due : 02-03-2024  
3.9 Calibration done at : VI Mechanical Lab  
3.10 Discipline : Mechanical (Torque)

### 4 Environmental Condition

Temperature 19.6 °C Humidity 51 %RH

### 5 Standards Used for calibration

| Sl. No. | Nomenclature  | Make & Model                  | Torque Sensor's SI. No | Traceable Cert. No.                             | Validity   |
|---------|---|-------------------------------|------------------------|---|------------|
| 1       | 5digit Digital Motorized Torque Wrench calibration system up to 1000 Nm | Sushma & QST SA-123/ QDD-01BV | S28-03 & S28-04        | VI/22-23/INT-ME-250-02 & VI/22-23/INT-ME-250-03 | 14.07.2023 |

### 6 Note:

- The Calibration Certificate relates only to the above DUC
- Publication or reproduction of this Certificate in any form other than by complete set of the whole report & in the language, written, is not permitted without the written consent of VI Lab..
- Corrections/erasing, invalidate the Calibration Certificate.
- Calibration of the DUC are traceable to National standards/International Standards
- Any error in this Certificate should be brought to our knowledge within 30 days from the date of this Cert.
- Results Reported are valid at the time of and under the stated conditions of measurements
- The usage of NABL Symbol is as per NABL guidelines given in NABL-133

Calibrated By

Sudhakar G  
(Calibration Engineer)

Checked By

P.Santhosh Kumar  
(Lab-In-Charge)

Authorised Signatory

Ganeshdar C.V.

(NABL Accredited Calibration Lab)



COMMITTED TO THE  
CUSTOMER SINCE - 1996

# Vaidyanatheshwara INSTRUMENTS

## CERTIFICATE OF CALIBRATION



No. 301/A, 9th Main Road, 3rd Cross, Rajiv Gandhi Nagar, J.B. Kaval, Nandhini Layout Post, Bangalore - 560 096.  
Ph : 080-23377266, Mob : 9986586789 / 9632221171 / 9964308118 | Email : info@viplgroup.com Web : www.viplgroup.com

NABL Accredited Calibration Lab as per ISO/IEC 17025 : 2017 With vide Certificate No: CC-2473

Certificate No. VI/22-23/8113-06

Page No: 2 of 2

Range: 50-220Nm/5Nm

Results:

| Sl No. | DUC Set (N-m) | STD Reading (N-m) | Deviation Observed (N-m) | % Of Error |
|--------|---------------|-------------------|--------------------------|------------|
| 1      | 50            | 50.62             | -0.6                     | -1.225     |
| 2      | 100           | 101.2             | -1.2                     | -1.186     |
| 3      | 150           | 152.3             | -2.3                     | -1.510     |
| 4      | 200           | 202.7             | -2.7                     | -1.332     |
| 5      | 220           | 223.5             | -3.5                     | -1.566     |

Note:

1. Permissible error as per ISO:16906:2018 =  $\leq 10 \text{ N.m} \pm 6\%$  &  $> 10 \text{ N.m} \pm 4\%$  of set value.

Conclusion/ Remarks:

1. Uncertainty Measurement Is  $\pm 1.5\% \text{ FS}$  at **95.45%** Confidence level and Coverage Factor K = 2.

Calibrated By

Sudhakar.G  
(Calibration Engineer)

Checked By

P.Santhosh Kumar  
(Lab-In-Charge)

Authorised Signatory

Gangadhar C.K.

