



COMMITTED TO THE
CUSTOMER SINCE - 1996

Vaidyanatheshwara INSTRUMENTS

CALIBRATION CERTIFICATE

No. 301/A, 9th Main Road, 3rd Cross, Rajiv Gandhi Nagar, J.D. Kaval, Nandhini Layout Post, Bangalore - 560 096,
Contact : 080-23377266, Mob : 9448080177 / 9632221171 / 9964308118 | Email : vplgroup85@gmail.com | Web : www.vplgroup.com

"CALIBRATION LABORATORY"

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1 Name and Address of the Customer : M/s. MAG ENGINEERING UNIT A
(A Unit of Sandhar Technologies Ltd.)
No. 46A, 3rd Main, 2nd Phase, Peenya,
Bangalore, Karnataka - 560 058.

2 Customer Reference

2.1 SRF No. : 8525
2.2 Certificate No. : VI/22-23/8525-15
2.3 Format No. : VI-FRM-ME-083
2.4 DC No & Date : SIA/RGP21-22/0365 & 13-03-2023
2.5 Date Of Receipt : 14-03-2023
2.6 Date Of Issue : 17-03-2023

3 Details Of Device Under Calibration(DUC).

3.1 Nomenclature : Viscosity Cup (Ford Cup)
3.2 Make : Blue Maglc
3.3 ID No. : MS-05
3.4 Calibration Procedure No./ Ref Doc : SOP-16-82 / Comparison Method
3.5 No. of Pages : 2
3.6 Calibration Date : 17-03-2023
3.7 Calibration Due : 16-03-2024
3.8 Calibration done at : VI Mechanical Lab
3.9 Discipline : Mechanical

4 Environmental Condition

Temperature 20.2-20.6 °C Humidity 61-53 %RH

5 Standards Used for calibration

Sl. No.	Nomenclature	Make / Model	SL No	Traceable Cert. No.	Traceable to	Validity
1	Time Totalizer	Beltronics / 501	251	VI/22-23/INT-ETH-426	VI-Bangalore	20-02-2024

6 Note:

- 6.1. The Calibration Certificate relates only to the above DUC
- 6.2. 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.
- 6.3. Corrections/erasing, invalidate the Calibration Certificate.
- 6.4. Calibration of the DUC are traceable to National standards/International Standards
- 6.5. Any error in this Certificate should be brought to our knowledge within 30 days from the date of this Cert.
- 6.6. Results Reported are valid at the time of and under the stated conditions of measurements.

Calibrated By

Hemanth Kumara G
(Calibration Engineer)

Checked By

P. Santhosh Kumar
(Lab-In-Charge)





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Results:

Sl.No.	Kinematic Viscosity Oil Used	Time, x in Sec	Temperature in °C	Viscosity, y in mm ² /s	Calculated Viscosity using equation in mm ² /s	Error in %	Remarks
1	C 20	21.297	21.5	34.38	34.99	-1.77	Pass
2	C 35	27.317	21.7	65.36	66.03	-1.02	Pass
3	C 100	60.863	21.1	236.67	238.99	-0.98	Pass

Conclusion

The Best Estimate of Viscosity of Oil at Reference Temperature as Shown in Tabular Column

Using This Ford Cup is Given by the Equation.

$$v = 5.1559 t^{-74.8177}$$

where,

v = kinematic Viscosity in mm²/s

t = Flow Time in Sec

Note

1. Accuracy is Claimed as per ASTM Standard ASTM D 1200
2. Measured Uncertainty : $\pm 0.45\%$ with 95.45% confidence level with coverage Factor K=2.

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