

Unique Lab Report No : CC281318000000001F

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Certificate No. : SCW-0918-001

Certificate Issue Date : September 15, 2018

Calibration Due Date : September 14, 2019

Customer Name : **Maruti Weigtech Pvt. Ltd.**
255-258, Shukan Mall,
Science City Road, Sola,
Ahmedabad - 380060
Gujarat, India

Instrument Detail : **Calibration Weights set**

Instrument Condition : Satisfactory at the time of receipt

Date of Receipt : September 1, 2018

Inward Reference No : SCW-001

Density - Ref. Weights : Stainless Steel (7950 + 140) kg / m³
(From Ref. Weight's Certificate)

Density - Test Weights : Stainless Steel (7950 ± 140) kg / m³
(Assumed Density)

Shape of Weights : 1 mg to 500 mg - Wire Weights
1/10/100 mg - Triangle Shape
2/20/200 mg - Square Shape
5/50/500 mg - Pentagon Shape
1 g to 20 kg - Integral Cylindrical Knob

Make : MARUTI

Model : SCW-001-20K-E1-ASS

Serial No : 110032-001

Equipment ID : MWPL/SCW/001

Range of Capacity : 1 mg to 20 kg

Accuracy Class : E1

Stabilization Time : 350 hrs

Avg. Temperature : 25.1 °C

Avg. Humidity : 58 % Rh

Avg. Pressure : 1001 mbar

Important Remarks :

- 01** Environmental conditions mentioned in the certificate was observed during the calibration.
Temperature change is limited to : ± 0.3 °C per hour with a maximum of ± 0.5 °C per 12 hours
Relative Humidity change is limited to : 40 % to 60 % with a maximum of ± 5 % per 4 hours
- 02** The Weights listed on this calibration report have been compared to reference mass standards that are traceable to the SI through the Zwibel, France (COFRAC Accreditation).
- 03** Reference standards and balances used to perform the calibration are listed on Page no. 3.
- 04** The weights calibrated for this report have been calibrated in accordance with Laboratory Procedure MWPL-SOP-001. The calibration performed meets the criteria as described in the current revisions of NABL 122-02 and OIML R-111.
- 05** This calibration also meets specifications as outlined in ISO/IEC 17025, ISO 9001, and applicable documents.
- 06** The calibration certificate issued for weights/mass used for scientific or industrial purpose only.
- 07** This certificate of calibration shall not be reproduced except in full, without the written approval of MARUTI Weigtech Pvt. Ltd. This certificate of calibration must not be used by the customer to claim product endorsement by NABL, NPL, COFRAC and similar government agencies.

Approved By:

Mr. Naitik Patel

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* Results of Calibration *

| Identification/ Serial no. | Nominal mass value | Conventional Mass value | Correction | Tolerance Limit (MPE) | Expanded Uncertainty (U) | Calibration By | Calibration Date |
|-------------------------------|-----------------------|----------------------------|--------------|-----------------------------|-----------------------------|-------------------|---------------------|
| | | (g) | (g) | (±) (g) | (±) (g) | | |
| | 1 mg | 0.001 001 3 | 0.000 001 3 | 0.000 003 | 0.000 001 0 | Sudhir | 14-09-18 |
| * | 2 mg | 0.002 001 4 | 0.000 001 4 | 0.000 003 | 0.000 001 0 | Sudhir | 14-09-18 |
| | 2 mg | 0.002 001 7 | 0.000 001 7 | 0.000 003 | 0.000 001 0 | Sudhir | 14-09-18 |
| | 5 mg | 0.005 000 9 | 0.000 000 9 | 0.000 003 | 0.000 001 0 | Sudhir | 14-09-18 |
| | 10 mg | 0.010 001 2 | 0.000 001 2 | 0.000 003 | 0.000 001 0 | Sudhir | 14-09-18 |
| | 20 mg | 0.020 001 5 | 0.000 001 5 | 0.000 003 | 0.000 001 0 | Sudhir | 14-09-18 |
| * | 20 mg | 0.020 000 8 | 0.000 000 8 | 0.000 003 | 0.000 001 0 | Sudhir | 14-09-18 |
| | 50 mg | 0.050 001 3 | 0.000 001 3 | 0.000 004 | 0.000 001 2 | Sudhir | 14-09-18 |
| | 100 mg | 0.100 002 1 | 0.000 002 1 | 0.000 005 | 0.000 001 6 | Sudhir | 14-09-18 |
| | 200 mg | 0.200 001 9 | 0.000 001 9 | 0.000 006 | 0.000 002 0 | Sudhir | 14-09-18 |
| * | 200 mg | 0.199 998 7 | -0.000 001 3 | 0.000 006 | 0.000 002 0 | Sudhir | 14-09-18 |
| | 500 mg | 0.500 004 2 | 0.000 004 2 | 0.000 008 | 0.000 002 6 | Sudhir | 14-09-18 |
| | 1 g | 1.000 005 2 | 0.000 005 2 | 0.000 010 | 0.000 003 0 | Sudhir | 14-09-18 |
| | 2 g | 2.000 006 2 | 0.000 006 2 | 0.000 012 | 0.000 004 0 | Sudhir | 14-09-18 |
| * | 2 g | 2.000 005 1 | 0.000 005 1 | 0.000 012 | 0.000 004 0 | Sudhir | 14-09-18 |
| | 5 g | 5.000 007 | 0.000 007 | 0.000 016 | 0.000 005 0 | Sudhir | 13-09-18 |
| | 10 g | 10.000 009 | 0.000 009 | 0.000 020 | 0.000 006 6 | Sudhir | 13-09-18 |
| | 20 g | 20.000 012 | 0.000 012 | 0.000 025 | 0.000 008 0 | Sudhir | 13-09-18 |
| * | 20 g | 20.000 011 | 0.000 011 | 0.000 025 | 0.000 008 0 | Sudhir | 13-09-18 |
| | 50 g | 50.000 013 | 0.000 013 | 0.000 030 | 0.000 010 0 | Sudhir | 13-09-18 |
| | 100 g | 100.000 023 | 0.000 023 | 0.000 050 | 0.000 016 0 | Sudhir | 13-09-18 |
| | 200 g | 200.000 06 | 0.000 06 | 0.000 100 | 0.000 031 6 | Maulik | 13-09-18 |
| * | 200 g | 200.000 07 | 0.000 07 | 0.000 100 | 0.000 031 6 | Maulik | 13-09-18 |
| | 500 g | 500.000 12 | 0.000 12 | 0.000 250 | 0.000 081 0 | Maulik | 13-09-18 |
| | 1 kg | 1000.000 19 | 0.000 19 | 0.000 500 | 0.000 161 0 | Maulik | 13-09-18 |
| | 2 kg | 2000.000 7 | 0.000 7 | 0.001 000 | 0.000 319 0 | Maulik | 13-09-18 |
| * | 2 kg | 2000.000 3 | 0.000 3 | 0.001 000 | 0.000 319 0 | Maulik | 13-09-18 |
| | 5 kg | 5000.001 2 | 0.001 2 | 0.002 500 | 0.000 890 0 | Maulik | 13-09-18 |
| | 10 kg | 10000.000 9 | 0.000 9 | 0.005 000 | 0.001 608 0 | Maulik | 12-09-18 |
| | 20 kg | 20000.004 | 0.004 | 0.010 000 | 0.003 206 0 | Maulik | 12-09-18 |

- > Mass values of all the above stated weights are within the maximum permissible errors of OIML E1 accuracy class as per OIML R-111.
- > The reported uncertainty is at coverage factor k=2 which corresponds to a coverage probability of approximately 95% for a normal distribution. The contribution of uncertainty originating from the mass standards and balances used, the weighing process and the air buoyancy correction are taken into account.
- > The reported Expanded Uncertainty (U) for the Nominal mass value is 1/3 of the maximum permissible error (MPE) for the class X as defined by the document quoted in reference.

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| * Masters Used for Calibration * | | | | | | |
|----------------------------------|-----------------------|--|---|-------------------------|-------------------------------------|----------------------------------|
| Identification/ Serial no. | Nominal mass value | Standards Used | Traceability Certificate No. | Calibration Due Date | Mass Comparator /Balance(s) Used | Procedure |
| | 1 mg | OIML E1 Class 1 mg to 20 kg Certified by Zwiebel, France (COFRAC Accreditation) | N Z18 22332 <u>1</u> | 18-07-21 | 2.1 g X 0.1 µg | Substitution ABBA 6 Cycles |
| | 2 mg | | | | | |
| | 5 mg | | | | | |
| | 10 mg | | | | | |
| | 20 mg | | | | | |
| | 50 mg | | | | | |
| | 100 mg | | | | | |
| | 200 mg | | | | | |
| | 500 mg | | | | | |
| | 1 g | | | | | |
| | 2 g | | | | | |
| | 5 g | | | | | |
| | 10 g | | | | | |
| | 20 g | | | | | |
| | 50 g | | | | | |
| | 100 g | | | | | |
| | 200 g | | | | | |
| | 500 g | | | | | |
| | 1 kg | | | | | |
| | 2 kg | | | | | |
| | 5 kg | | | | | |
| | 10 kg | N Z18 22333 | 20-06-21 | 10 kg X 100 µg | | |
| | 20 kg | N Z18 22334 <u>1</u> | 21-06-21 | 20 kg X 1 mg | | |

Format No : MWPL-FMT-EXE-03-E Rev.00

Authorization

Naitik Patel
Authorised Signatory