



CC - 2346



# M.A.D. Kantawala

## CALIBRATION LABORATORY

### Calibration Certificate

<b>Name of Customer → National Centre For Quality Calibration</b> 4, Abhishree Corporate park, Nr.Swagat Bunglows BRTS, Iskcon-Ambli Road, Ambli, Ahmedabad – 380058, Gujarat, India.	Certificate No.	MMD/140324/02
	Date of Issue	15-03-2024
	Date of Calibration	14-03-2024
	# Due Date	13-03-2027

Date Of Receipt / Ref. No. → 11-03-2024 F/CAL/02/CR, Issue No.04  
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<b>Discipline</b>	Mechanical – Weights	<b>ULR No.</b>	CC23462400000133F
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<b>Details of Observation of Unit Under Calibration (UUC)</b>	Identification No.	: NCQC/M-47
	Serial No.	: NCQC/M/W/E1/04
	Name of Instrument	: Weight Box

<b>Weights</b>	1mg to 500mg Total = 12 pcs	1g to 200g Total = 11 pcs
<b>Type</b>	Wire Type	Cylindrical Knob Type
<b>Material</b>	Stainless steel	
<b>Assumed Density</b>	7950 ± 140 kg/m <sup>3</sup>	

<b>Make</b>	Weightronics	<b>Visual Inspection</b>	OK
<b>Location</b>	=====	<b>Barometric Pressure</b>	1005 ± 15 hPa

#### Results of Calibration

Sr. No.	Denomination (Unit under calibration)	Mass value in g.	Deviation in g.	Uncertainty (±) in mg.	Class
1	0.001 g.	0.0010015	0.0000015	0.0008	E1
2	0.002 g.	0.0020007	0.0000007	0.0008	E1
3	* 0.002 g.	0.0019994	-0.0000006	0.0008	E1
4	0.005 g.	0.0049995	-0.0000005	0.0008	E1
5	0.01 g.	0.0100020	0.0000020	0.0008	E1
6	0.02 g.	0.0200021	0.0000021	0.0008	E1
7	* 0.02 g.	0.0200019	0.0000019	0.0008	E1
8	0.05 g.	0.0500014	0.0000014	0.0008	E1
9	0.1 g.	0.1000038	0.0000038	0.0008	E1
10	0.2 g.	0.2000050	0.0000050	0.0009	E1
11	* 0.2 g.	0.2000028	0.0000028	0.0009	E1
12	0.5 g.	0.5000058	0.0000058	0.0010	E1
13	1 g.	0.9999916	-0.0000084	0.0017	E1
14	2 g.	1.9999908	-0.0000092	0.0022	E1
15	* 2 g.	1.9999999	-0.0000001	0.0022	E1
16	5 g.	5.0000008	0.0000008	0.0032	E1
17	10 g.	9.999985	-0.000015	0.0053	E1
18	20 g.	19.999982	-0.000018	0.0061	E1
19	* 20 g.	19.999981	-0.000019	0.0061	E1
20	50 g.	49.999982	-0.000018	0.010	E1
21	100 g.	99.999969	-0.000031	0.017	E1
22	200 g.	199.99994	-0.00006	0.030	E1
23	* 200 g.	199.99995	-0.00005	0.030	E1

Traceable To National / International Standards.

<b>Calibrated By</b>	<i>Vilas</i> Vilas Prajapati Calibration Engineer	<b>Reviewed and Approved By</b>	<i>V</i> Viral Mistry Technical Manager
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**M.M.D. Kantawala**  
CALIBRATION LABORATORY**Calibration Certificate**

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Date Of Receipt / Ref. No. → 11-03-2024		F/CAL/02/CR, Issue No.04 Page 2 of 2	
<b>Discipline</b>	Mechanical – Weights	<b>ULR No.</b>	CC23462400000133F
<b>Details of Observation of Unit Under Calibration (UUC)</b>	Identification No. Serial No. Name of Instrument	: NCQC/M-47 : NCQC/M/W/E1/04 : Weight Box	

**Remarks:**

- Mass values of all the weights are conventional mass values and within the maximum errors permissible in "E<sub>1</sub>" Accuracy Class of weights as per OIML R 111-1.
- Thermal stabilization time 48 hours.
- These results are obtained at the time of calibration.
- Weights are calibrated for scientific or industrial purpose only.
- # Due date is given as suggested by customer.
- Any hand written corrections (except @ marked) or photocopies of the report invalidates this certificate.
- Environment condition during calibration: 24 ± 0.5°C, 40 to 60% Rh. (Change in temperature and relative humidity during the calibration were less than ± 0.3 °C per hour with a maximum of ± 0.5 °C per 12 hours, and ± 5% Rh per 4 hours respectively)
- Average temperature → 24.3°C, average pressure 1010.7 hPa and average humidity 49.1% Rh during calibration of instruments.
- The uncertainties are for a confidence probability of not less than 95.45% with coverage factor k = 2.
- Condition of instrument found satisfactory during receipt.
- Calibration is performed on the electronic weighing balance against standards mass by comparison method under controlled conditions (ABBA Method).
- All calibration performed by MMD Kantawala Calibration Laboratory. None of the results reported in this certificate are from external provider.
- Calibration results reported in this certificate relates only to the item calibrated.
- Data provided by customer: Identification No. and accuracy of UUC.
- Reference standard no.: OIML R 111 – 1 for calibration and classification of weights.
- Reference Calibration method no.: MMD/CM/02.
- Master equipment / reference standards are traceable to NABL accredited calibration laboratory.
- Corrected mass value is calculated based on ABBA method.

**Details of Master Instrument Used for Calibration**

Nomenclature	Make / Model	Sr. No. / Id. No.	Class	Calibrated by	Calibration certificate no.	Calibration Due Date
Reference Weight Box	Weigh India / =====	MMD/CAL/06	E1	CC-2316	WI/Dec/23/003	08-12-2026
Mass Comparator	Sartorius / MCM6.7	36301047	I	Not applicable	Not applicable	=====
Mass Comparator	Sartorius / MCM106	36301045	I	Not applicable	Not applicable	=====
Mass Comparator	Sartorius / MCM605	36301046	I	Not applicable	Not applicable	=====

**Traceable To National / International Standards.**

<b>Calibrated By</b> Vilas Vilas Prajapati Calibration Engineer	<b>Reviewed and Approved By</b> Viral Mistry Technical Manager
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