

## HIGH PRECISION WEIGHTS FOR MICRO ACCURACY

(E1, E2, F1, F2, M1, M2, M3 Class Weights)



The weights of E1 and E2 classes are of very higher accuracy and used in various laboratories according to their grade, for verification of weighing equipment of lower class accuracy.

The process of bringing the weights within prescribed tolerance is called "adjustment" whereas assigning its mass value is termed as "calibration". It is most essential to choose the right materials for the right weights. OIML has recommended that high precision weights like E1, E2, F1 and F2 class accuracy should be practically non-magnetic. This is just to avoid the magnetic effect on the balance during the operation.

Our high denominational weights of E1 and E2 class accuracy are being calibrated by the **NATIONAL PHYSICAL LABORATORY OF INDIA** and despatched with certification but may be supplied with calibration certificate by NPL on request.

## TABLE OF TOLERANCES IN ( $\pm$ ) mg

(based OIML R - 111 Part - 1)

Accuracy Class	M <sub>2</sub>		M <sub>1</sub>		M <sub>1</sub>		F <sub>2</sub>	F <sub>1</sub>	E <sub>2</sub>	E <sub>1</sub>
50kg	8000	-	2500	-	2500	-	800	250	80	-
20kg	3000	-	1000	-	1000	-	300	100	30	-
10kg	1600	-	500	-	160	-	160	50	16	5.0
5kg	800	-	250	-	250	-	80	25	8.0	2.5
2kg	300	-	100	-	100	-	30	10	3.0	1.0
1kg	160	-	50	50	50	-	16	5.0	1.6	0.5
500g	80	-	25	25	25	-	8.0	2.5	0.8	0.25
200g	30	-	10	10	10	-	3.0	1.0	0.3	0.10
100g	16	-	5.0	5.0	5.0	-	1.6	0.5	0.16	0.05
50g	10	-	3.0	3.0	3.0	-	1.0	0.3	0.10	0.03
20g	8.0	-	2.0	2.0	2.0	-	0.6	0.20	0.06	0.02
10g	5.0	-	1.6	1.5	1.6	-	0.5	0.16	0.05	0.016
2g	4.0	-	1.2	1.2	1.2	-	0.4	0.12	0.04	0.012
1g	3.0	-	1.0	1.0	1.0	-	0.3	0.10	0.03	0.010
500mg	2.5	2.5	0.8	-	0.8	-	0.25	0.08	0.025	0.008
200mg	2.0	2.0	0.6	-	0.6	-	0.20	0.06	0.020	0.006
100mg	1.6	1.5	0.5	-	0.5	-	0.16	0.05	0.016	0.005
50mg	-	1.2	0.4	-	0.4	-	0.12	0.04	0.012	0.004
20mg	-	1.0	0.3	-	0.3	-	0.10	0.03	0.010	0.003
10mg	-	0.8	0.25	-	0.25	-	0.08	0.025	0.008	0.003
5mg	-	0.6	0.20	-	0.20	-	0.06	0.020	0.006	0.003
2mg	-	0.6	0.20	-	0.20	-	0.06	0.020	0.006	0.003
1mg	-	0.6	0.20	-	0.20	-	0.06	0.020	0.006	0.003

Note 1: All tolerances are in milligrams (mg) unless otherwise stated.

Note 2: All data contained in the above table is for informational use only. Atlantic Scale Company, Inc. does not assume responsibility for the above information; the information has been transcribed from the reference standards listed below.

References: OIML R 111:1994; ASTM E 617-97; NIST 105-1:1990



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