

Weights & Weight Box (E1, E2, F1, F2, M1, M2)

Laboratory Weights



High Precision Laboratory Weights Sets & Weights

Class E1 - Used as primary reference standard for calibrating other reference standard & weights where the stability of the environment & careful handling is assured. Although very stable one-piece construction Class E1 weights have no method of adjustment & are not suitable for general laboratory use.

Class E2 - Used as reference standard for calibrating other weights & is appropriate for calibrating high precision analytical balances with readability as low as 0.1 mg to 0.01 mg. Class E2 weights can also be used to calibrate Class F1 weights.

We provide Stainless Steel High Precision Laboratory Weights Sets & Weights in Accuracy Class of OIML R 111-1 Edition 2004(E): E1 & E2, Capacity Range from 1 mg to 20 kg.

Specification : OIML R 111-1 Edition 2004 (E)



Construction : Solid Single Piece

Material : Stainless Steel

Shapes :

20 kg to 1 g - Cylindrical knob Weights

500-50-5 mg - Pentagon Wire Milligram Weights

200-20-2 mg - Square Wire Milligram Weights

100-10-1 mg - Triangle Wire Milligram Weights



Appearance : Weights Sets are supplied in Fine Polished Steam Beach Handmade Strong Wooden Cases lined with velvet along with the matching accessories like forceps for lifting the fractional and smaller weights, brushes & Piece of Chamois Leather for cleaning the weights, gloves for not to touch weights with naked hands. Individual Weights are supplied in Fine Polished Steam Beach Handmade Strong Wooden Cases lined with velvet.

Precaution : handling of these weights with naked hands are prohibited & marking is not allowed.

Precision Laboratory Weights Sets & Weights

Class F1 - Used for calibrating high precision top loading balances with a readability as low as 0.01 g to 0.001 g. Class F1 weights can also be used to calibrate Class F2 weights

Class F2 - Used for calibrating semi analytical balances & for student use. Class F2 Wights can also be used to calibrate weighing instruments for important commercial transaction like gold & precious stones. Class F2 weights can also be used to calibrate Class M1 weights

We provide Stainless Steel Laboratory Weights Sets & Weights in Accuracy Class of OIML R 111-1 Edition 2004(E): F1 & F2 Capacity Range from 1 mg to 50 kg

Specification : OIML R 111-1 Edition 2004(E)

Construction : 50kg to 20g-Two Pieces having screw type Adjusting cavity
10 g to 1 g - Solid Single Piece

Material : 50 kg to 50 mg - Stainless Steel
20 mg to 1 mg - Aluminium

Shapes :

50 kg & 20 kg - Cylindrical Handle Weights

20 kg to 1 g - Cylindrical Knob Weights

500-50-5 mg - Pentagon Leaf Weights

200-20-2 mg - Square Leaf Weights

100-10-1 mg - Triangle Leaf Weights



Appearance : Weights Sets are supplies in Fine Polished Steam Beach Handmade Strong Wooden Cases line with velvet along with the matching accessories like forceps for lifting the fractional & smaller weights, brushes & Piece of Chamois Leather for cleaning the weights, gloves for not to touch weights with naked hands. Individual Weights are supplied in Fine Polished Steam Beach Handmade Strong Wooden Cases line with velvet.

Precaution : Handling all of these weights with naked hands are prohibited.

Laboratory Weights

We manufacture Stainless Steel Bullion & Laboratory Weights Sets & Weights in Accuracy Class of OIML R 111-1 Edition 2004(E): M1, Capacity Range from 1 mg to 50 kg.



We manufacture Laboratory Weights Sets & Weights in Accuracy Class of OIML R 111-1 Edition 2004(E): M1, Capacity Range from 1 mg to 20 kg.



Specifications :

OIML R 111-1 Edition 2004 (E) & the Standards of Weights & Measures (General) Rules, 1987 IS: 17025 : 2017

Construction :

50 kg & 20 kg - Two Pieces having the Adjusting Cavity from top

10 kg to 20 g - Single Piece having the Adjusting Cavity from Top

10 g to 1 g - Solid Single Piece

Material :

50 kg to 50 mg - Stainless Steel & Brass

20 mg to 1 mg - Aluminium

Shapes :

50 kg & 20 kg - Cylindrical with handle weights

20 kg to 1 g - Cylindrical with knob weights

500-50-5 mg - Pentagon Leaf Weights

200-20-2 mg - Square Leaf Weights

100-10-1 mg - Triangle Leaf Weights

Appearance :

Weights Sets are supplied in, Self-Locking Sturdy Plastic Box along with the matching accessories like Forceps for lifting the fractional & smaller weights. Individual Weights are supplied "LOOSE WEIGHTS"

Optional :

Weights Sets are supplied in Fine Polished Steam Beach Handmade Strong Wooden Glass lined with Velvet along with the matching accessories like Forceps for lifting the fractional & smaller weights. Individual Weights are also supplied in Fine Polished Steam Beach Handmade Strong Wooden Cases lined with Velvet.

Calibration Weight Box

E1 - 1 mg to 200 g



Dimension & Weights - 1 mg to 200 g
1-2-2*-5-10-20-20*-50-100-200-200*-500 mg
1-2-2*-5-10-20-20*-50-100-200-200* g

Type and Shape - Wire Weights
Triangle shape (1,10,100 mg)
Square shape (2,20,200 mg)
Pentagon shape (5,50,500 mg) with
Cylindrical Knob Shape (1 g to 200 g)

Material of Construction - Austenitic Stainless Steel

Construction Design and Surface - Mono-block Piece with Mirror Finish

Density - $8,000 \pm 50 \text{ kg/m}^3$

Storage Case - Alloy case

Weights intended to ensure traceability between national mass standards (with values derived from the International Prototype of the kilogram) and weights of class E2 and lower. Class E1 weights or weight sets shall be accompanied by a calibration certificate.

Used as a primary reference for calibrating other reference standards and weights where the stability of the environment and careful handling are assured. Class E1 weights have no method of adjustment and are not suitable for general laboratory use. The uncertainty is guaranteed to be $1/3$ the tolerance.

E2 - 1 mg to 200 g



Denomination and Weight Details - 1 mg to 200 g

1-2-2*-5-10-20-20*-50-100-200-200*-500 mg

1-2-2*-5-10-20-20*-50-100-200-200* g

Type and Shape - Wire Weights

Triangle shape (1,10,100 mg)

Square shape (2,20,200 mg)

Pentagon shape (5,50,500 mg) with

Cylindrical Knob Shape (1 g to 200 g)

Material of Construction - Austenitic Stainless Steel

Construction Design and Surface - Mono-block Piece with Mirror Finish

Density - $8,000 \pm 50 \text{ kg/m}^3$

Storage Case - Alloy case

Weights intended for use in the verification or calibration of class F1 weights and for use with weighing instruments of special accuracy class I. Class E2 weights or weight sets shall be accompanied by a calibration certificate.

Can be used as a reference standard in calibrating other weights and is appropriate for calibrating high-precision analytical balances with a readability as low as 0.1 mg to 0.01 mg.

E2 Class - 500 g to 5 kg



Denomination and Weight Details - 500 g to 5 kg

500 g, 1 kg, 2 kg (2), 5 kg

Type and Shape - Cylindrical Knob Shape

Material of Construction - Austenitic Stainless Steel

Construction Design and Surface - Mono-block Piece with Mirror Finish

Density - $8,000 \pm 50 \text{ kg/m}^3$

Storage Case - Alloy case

Weights intended for use in the verification or calibration of class F1 weights and for use with weighing instruments of special accuracy class I. Class E2 weights or weight sets shall be accompanied by a calibration certificate.

Can be used as a reference standard in calibrating other weights and is appropriate for calibrating high-precision analytical balances with a readability as low as 0.1 mg to 0.01 mg.

F1 Class - 1 mg to 200 g



Denomination and Weight Details - 1 mg to 200 g

1-2-2*-5-10-20-20*-50-100-200-200*-500 mg

1-2-2*-5-10-20-20*-50-100-200-200* g

Type and Shape - Wire Weights

Triangle shape (1,10,100 mg)

Square shape (2,20,200 mg)

Pentagon shape (5,50,500 mg) with

Cylindrical Knob Shape (1 g to 200 g)

Material of Construction - High grade Stainless Steel

Construction Design and Surface - Single Piece with Mirror Finish

Density - $7,950 \pm 140 \text{ kg/m}^3$

Storage Case - Alloy Case

Weights intended for use in the verification or calibration of class F2 weights and for use with weighing instruments of special accuracy class I and high accuracy class II.

Appropriate for calibrating high-precision top loading balances with a readability as low as 0.01 g to 0.001 g.

F1 Class - 500 g to 5 kg



Denomination and Weight Details - 500 g to 5 kg

500 g, 1 kg, 2 kg (2), 5 kg

Type and Shape - Cylindrical Knob Shape

Material of Construction - High grade Stainless Steel

Construction Design and Surface - Two Piece with Mirror Finish

Density - $7,950 \pm 140 \text{ kg/m}^3$

Storage Case - Alloy Case

Weights intended for use in the verification or calibration of class F2 weights and for use with weighing instruments of special accuracy class I and high accuracy class II.

Appropriate for calibrating high-precision top loading balances with a readability as low as 0.01 g to 0.001 g.

F2 Class - 1 mg to 200 g



Denomination & Weight Details - 1 mg to 200 g

1-2-2*-5-10-20-20*-50-100-200-200*-500 mg

1-2-2*-5-10-20-20*-50-100-200-200* g

Type and Shape - Wire Weights

Triangle shape (1,10,100 mg)

Square shape (2,20,200 mg)

Pentagon shape (5,50,500 mg) with

Cylindrical Knob Shape (1 g to 200 g)

Material of Construction - High grade Stainless Steel

Construction Design and Surface - Single Piece with Mirror Finish

Density - $7,950 \pm 140$ kg/m³

Storage Case - Alloy Case

Weights intended for use in the verification or calibration of class M1 and possibly class M2 weights. Also intended for use in important commercial transactions (e.g. precious metals and stones) on weighing instruments of high accuracy class II.

For calibration of semi-analytical balances and for student use.

F2 Class - 500 g to 5 kg



Denomination and Weight Details - 500 g to 5 kg

500 g, 1 kg, 2 kg (2), 5 kg

Type and Shape - Cylindrical Knob Shape

Material of Construction - High grade Stainless Steel

Construction on Design & Surface - Two Piece with Mirror Finish

Density - $7,950 \pm 140$ kg/m³

Storage Case - Alloy Case

Weights intended for use in the verification or calibration of class M1 and possibly class M2 weights. Also intended for use in important commercial transactions (e.g. precious metals and stones) on weighing instruments of high accuracy class II.

For calibration of semi-analytical balances and for student use.

Measuring Weights

High- Grade stainless steel weights ideal as mass standards, used as the primary for calibrating other reference weights or high-precision analytical balances.

Our calibration weights cover the OIML accuracy classes E₁ - F₁ and are available individually or as sets in lined wood or robust aluminium boxes. To achieve traceability, documented weight calibration results are delivered in calibration certificates with details of conventional mass correction, uncertainty and traceability.

Calibration Weights are also known as Laboratory Weights.

Cylindrical Knob Type Weights



Scale: 1g - 20 kg

Class: E₁ E₂ F₁ F₂

Material: Stainless steel

Construction: Consists of a body and a lifting knob. The lifting knob is specifically designed for use with forceps or some other lifting device. Each weight (except Class E₁ E₂ weights) is marked with its nominal value. The design confirms to OIML R 111-1

- **one-piece construction for E₁ E₂ class weights.**
- **two-piece construction for F₁ & F₂ class weights.**

One piece construction indicates the weight is manufactured from a single uniform piece of stainless steel, the weight has no other material added to it, and it has no method of adjustment other than removing material by polishing. Class E₁ E₂ weights are of one-piece construction but E₁ E₂ do not have any adjusting material. Two-piece construction indicates the body of

the weight is the primary piece and the knob of the weight is the secondary piece. The knob has a thread that screws into the body and is tightened. There is a cavity below the knob thread in the body which contains adjusting material, typically the same material from which the weight is made. F_1 and F_2 . F_1 and F_2 class are adjusted with same material from which they are made.

Polishing: All surfaces are polished to a perfect, mirror-like finish and meet or exceed OIML R 111 specifications.

Suggested markets: Suggested Markets for OIML Precision Weights include, but are not limited to, pharmaceutical, forensic, chemical and nuclear industries.

Casing: Individual/set of weights packed in polished wooden box lined with velvet and provided with forces + gloves. We customize casing according to our customer needs.

F1 Stainless Steel

Perfect to satisfy the highest requirements in regulated industries



Suitable For	Official bodies, regulated & hygienically sensitive areas
Long-Term Stability	High glass polishing Forged stainless steel
Handling Safety	Sturdy aluminum carrying box included
Target Load Flexibility	Rectangular design Flat top & bottom surface
Nominal Value (kg)	1, 2, 5, 10 & 20
Tolerance MPE	Class F1
Calibration Certificate	Yes
Material, Grade	Stainless Steel, SS 304
Susceptibility x	<0.2
Surface	High gloss finish
Adjusting Cavity	Type 1 (Screwed sealing plug, Stainless steel)
Accessories	Lockable aluminum box & nylon gloves

F2 Stainless Steel

Special design ensures safe stacking & flexible loading



Suitable For	Frequent or heavy-duty use, all industrial areas
Long-Term Stability	Fine-tuned surface
Handling Safety	Centering rim on top prevents weights from falling off the stack
Target Load Flexibility	Dedicated carrier for safe accumulation up to 200kg
Nominal Value (kg)	5, 10, 20 & 50
Tolerance MPE	Class F2
Calibration Certificate	Yes
Material, Grade	Stainless Steel, SS 303
Susceptibility x	<0.8
Surface	Precision tuned finish
Adjusting Cavity	Type 1 (Sealing plug, tin)
Accessories	On Request Plastic Box Weigh Carrier <ul style="list-style-type: none"> - Nominal value 40 kg - Stacking up to 200 kg (8 x 20kg)

