

Cylindrical Weights

OIML Classes E2 | F1 | F2

Benefits

Sartorius cylindrical weights are high-quality working standards for everyday use.

These weights are non-magnetizable and have a polished surface. They are supplied in high-quality plastic cases that are suitable for use in cleanrooms.

Product Information

Regular inspection and testing of weighing instruments are essential to ensure reliable weighing results. Sartorius offers highly accurate metrological weights and weight sets with nominal mass values from 1 mg to 1,000 kg, special and test weights, as well as the right accessories required for correct handling, storage and cleaning of weights.

For unique identification and classification, all Sartorius weights – except for wire and leaf weights – are laser-engraved with an individual three-character alphanumeric marking in accordance with the OIML R111-1 International Recommendation. Therefore, Sartorius weights are 100% traceable throughout their entire life cycles.



Your DAkkS Partner for Mass

Sartorius has calibration laboratories for weights and weighing instruments. These calibration laboratories are accredited by the DAkkS* and meet the International Standard ISO IEC 17025, which is also recognized throughout Europe as a European Standard (EN ISO IEC 17025). Thus, weights calibrated by Sartorius are traceable to your national standard. DAkkS assessments are made according to the applicable requirements and the corresponding rules of the European Co-operation for Accreditation (EA), the International Accreditation Forum (IAF) and the International Laboratory Accreditation Cooperation (ILAC).

Recalibration Service

Recalibration of all weights, manufacturer brands and designs. Depending on how frequently weights are used and which accuracy is required, they must be recalibrated at regular intervals so that they meet the requirements for reliable measuring, inspection and test equipment. Sartorius offers recalibration service with DAkkS calibration certificates for all weights, regardless of class, design or brand.

Your local Sartorius Service Center will provide you with information on our recalibration service.



Technical Specifications

General	<ul style="list-style-type: none">▪ Cylindrical weights without adjustment cavity, solid mass▪ Weights are laser-engraved with an individual three-character alphanumeric marking▪ In all respects in accordance with the OIML R111-1 International Recommendation▪ All weights have a recess on the bottom side for optimal stability on a weighing pan
Material	<ul style="list-style-type: none">▪ STF, special stainless steel▪ Density (at 20 °C) $\rho = 7,950 \text{ kg/m}^3$, $U (k=2) \pm 100 \text{ kg/m}^3$▪ Hardness ~110 HB▪ Maximum polarization μOM: 0.05 – 1.5 μT▪ Magnetic susceptibility $\chi < 0.03$▪ Surface weights of OIML class E2: best finishing, high polished, roughness $R_z < 0.5 \mu\text{m}$▪ Surface weights of OIML class F1: best finishing, high polished, roughness $R_z < 1 \mu\text{m}$▪ Surface weights of OIML class F2: best finishing, polished or finely ground, roughness $R_z < 3 \mu\text{m}$
Case	<ul style="list-style-type: none">▪ Weights are delivered in a high-quality plastic screw-top box▪ Boxes are suitable for use in cleanrooms
Optional calibration	<ul style="list-style-type: none">▪ DAkkS calibration certificate



* German accreditation body for calibration, testing, inspection, certification of quality, products and services, etc.

Dimension | Shape

Nominal Value	Max. permissible error OIML class E2	Max. permissible error OIML class F1	Max. permissible error OIML class F2	Diameter	Height	Laser Marking
1 g	± 0.03 mg	± 0.10 mg	± 0.30 mg	5.1 mm	6.21 mm + 0.33	Yes
2 g	± 0.04 mg	± 0.12 mg	± 0.40 mg	6.5 mm	7.61 mm + 0.55	Yes
5 g	± 0.05 mg	± 0.16 mg	± 0.50 mg	8.7 mm	10.57 mm + 0.57	Yes
10 g	± 0.06 mg	± 0.20 mg	± 0.60 mg	11.0 mm	13.20 mm + 0.52	Yes
20 g	± 0.08 mg	± 0.25 mg	± 0.80 mg	13.8 mm	16.75 mm + 0.53	Yes
50 g	± 0.10 mg	± 0.30 mg	± 1.0 mg	19.0 mm	22.14 mm + 0.51	Yes
100 g	± 0.16 mg	± 0.50 mg	± 1.6 mg	27.7 mm	20.81 mm + 0.34	Yes
200 g	± 0.30 mg	± 1.0 mg	± 3.0 mg	34.9 mm	26.25 mm + 0.50	Yes
500 g	± 0.80 mg	± 2.5 mg	± 8.0 mg	47.3 mm	35.66 mm + 0.47	Yes
1 kg	± 1.6 mg	± 5.0 mg	± 16 mg	50.5 mm	62.55 mm + 0.80	Yes
2 kg	± 3.0 mg	± 10 mg	± 30 mg	64.1 mm	77.60 mm + 0.75	Yes
5 kg	± 8.0 mg	± 25 mg	± 80 mg	87.0 mm	111.02 mm + 1.33	Yes
10 kg	± 16 mg	± 50 mg	± 160 mg	110.0 mm	136.40 mm + 1.20	Yes

Storage | Packaging

Plastic Cases, with closed-pore foam inlay suitable for use in cleanrooms

Single Weights, rectangular plastic boxes

Nominal Value	Length [mm]	Width [mm]	Height [mm]
1 mg - 20 g	63	68	21

Single Weights, screw-top boxes


Nominal Value	Diameter [mm]	Height [mm]
50 g	Ø 47	62
100 g	Ø 47	62
200 g	Ø 51	67
500 g	Ø 61	94
1 kg	Ø 72	102
2 kg	Ø 84	139
5 kg	Ø 105	180
10 kg	Ø 137	221

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