

SimplyCal
BALANCE CALIBRATION



WEIGHTS FOR THE BEST

 **HÄFNER®**
THE PERFECT WEIGHT

WEIGHTS AND
WEIGHT SETS 2022



Certified to
DIN EN ISO 9001:2015



Deutsche
Akkreditierungsstelle
D-K-15192-01-00

Accredited to
DIN EN ISO/IEC 17025:2018

DKD

Member of
Deutscher
Kalibrierdienst



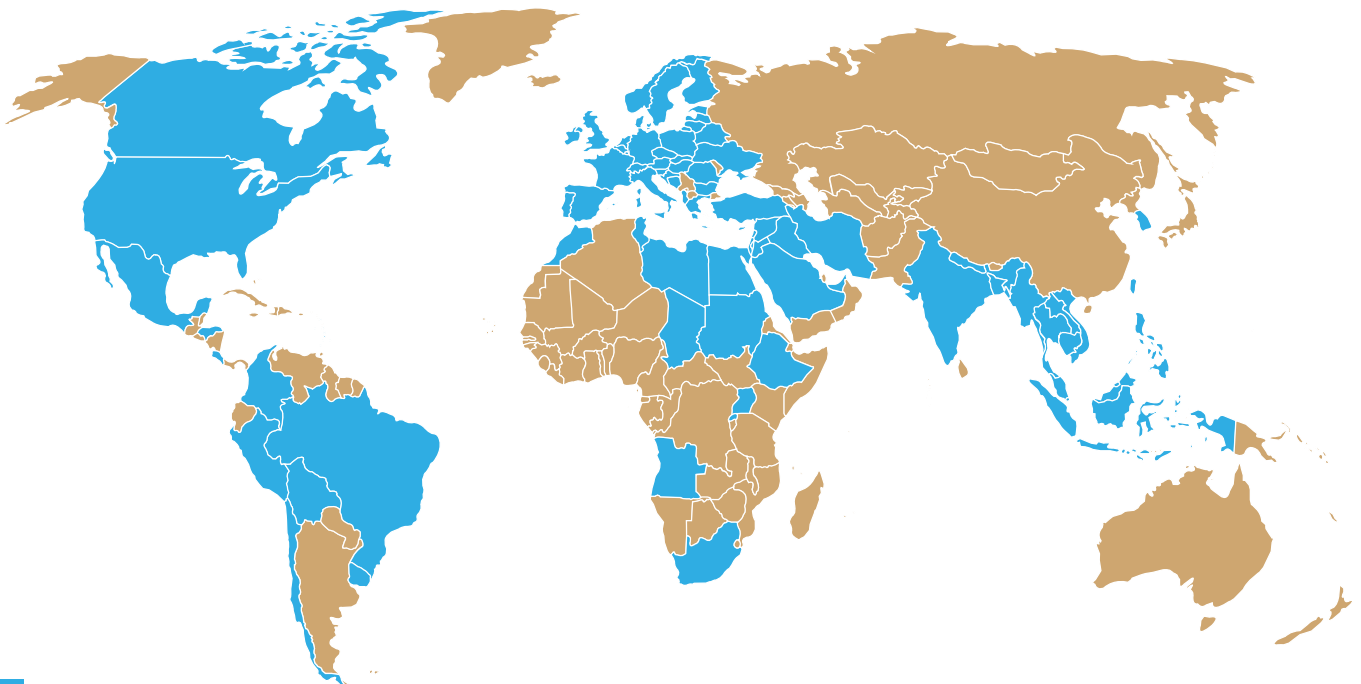
**WE SUPPLY RELIABLE AND HIGH
QUALITY WEIGHTS WORLDWIDE.**

OUR PRODUCTS

Our weights range from milligrams to tons, all made under one roof. In addition to meeting everyday customer needs, HÄFNER sets great store in accommodating special wishes:



- + very small weights (down to 0.1 mg)
- + very large weights (up to 5000 kg)
- + Special forms such as load weights or bent-wire milligram weights
- + Accessories such as bell jars or forks
- + Special markings (e.g. barcodes and signs)
- + Boxes and cases according to customer demands
- + the new Si-kg mass standard
- + SimplyCal software (Balance Calibration)





HÄFNER - SPECIALIST FOR WEIGHTS AND WEIGHT SETS

EVER SINCE OUR COMPANY WAS FOUNDED IN 1933 IN OBERROT, A SMALL TOWN IN THE SWABIAN REGION OF GERMANY, WE HAVE BEEN MANUFACTURING WEIGHTS FOR A WIDE RANGE OF APPLICATIONS.

These weights range from milligrams to tons, all made under one roof. We are certified to EN ISO 9001:2015 and are known worldwide for our high reliability and quality.

With the advent of electronic weighing devices, the role of weights has changed. Originally used as weighing instruments in conjunction with scales, weights are now used as adjusting, calibration and test equipment for balances and force measuring devices. The demands on weights are constantly rising with the continuously increasing accuracy and resolution of electronic load cells.

We recognised this trend early on and responded to the challenge. Rationalisation and the utilisation of advanced technology form the basis for our leading position in modern weights manufacturing.

Furthermore, our calibration laboratory MASSCAL is accredited by the German Accreditation Body (DAkkS) and is a member of the German Calibration Service (DKD).



Since 1933



THE NEW SI-KG MASS STANDARD

Worldwide only
available by Häfner

[page 12](#)



SIMPLYCAL

Software for
calibrating balances
for practitioners

[page 82](#)



WHEN PERFORMANCE COUNTS

OUR QUALITY EXPECTATIONS

Over many decades and in the history of our family-owned business, perfection and the name HÄFNER have become inseparable.

Worldwide trust and recognition by national metrology institutes (NMIs) such as PTB, NPL etc., as well as accredited calibration laboratories, state offices for verification, scale and balance manufacturers, companies for repair and maintenance, distributors for laboratory equipment, companies in all industrial sectors and not least our competitors, testify to our exceptional performance and our success.

Customer wishes and requirements for perfect weights can only be fulfilled by an ongoing development process that creates the necessary conditions and means for improvement.

We strive to repay your trust in HÄFNER with our quality and performance. **Challenge us!**



Certified to
DIN EN ISO 9001:2015



Accredited to
DIN EN ISO/IEC 17025:2018



Deutsche
Akkreditierungsstelle
D-K-15192-01-00



Member of
Deutscher
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QUALITY MANAGEMENT

HÄFNER has had a quality management system in place for over 20 years and is certified according to DIN EN ISO 9001:2015 (Reg. No. 059 993 QM15).

We are always up-to-date in science and technology thanks to our active participation in the technical committee of the German Calibration Service (DKD) and close cooperation with the German National Metrology Institute PTB.

OUR WEIGHTS ARE SO GOOD THAT OUR STAFF ARE PROUD OF EVERY ONE OF THEM.

PERFECT WEIGHTS

At HÄFNER every blank is formed from special materials. Advanced casting technology and extremely precise CNC machine tools are key parts of the production process.

Consistently high precision of all HÄFNER blanks is ensured by our exceptional expertise and advanced surface processing technology. What happens afterward is pure craftsmanship.

With considerable experience and sensitivity, our employees machine each weight to the specified value. Every step in the process is checked using extremely accurate scales with calibrated standard weights, and ambient conditions are monitored continuously. HÄFNER marks the weights using special corrosion-proof laser technology to ensure that the weights retain their values. This allows weight standards in classes E2, E1 and E0 to be identified reliably without confusion.

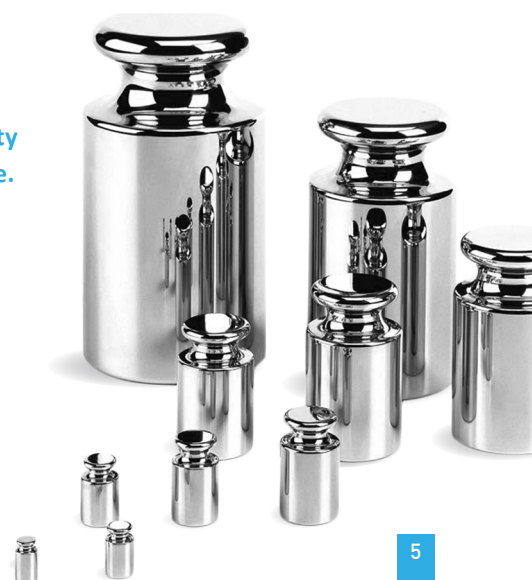
Another key factor for manufacturing perfect weights is our special HE210 steel, which was developed to meet the requirements of class

E0. As a result, for many years national metrology institutes have been able to rely on their primary weight standards (class E0) and secondary mass standards (class E1) from HÄFNER.

Before delivery, each HÄFNER weight is again cleaned and checked, and if requested by the customer a calibration certificate (e.g. a DAkkS calibration certificate) is prepared to document quality and traceability to the national kilogram prototype.

HÄFNER perfection is only possible with staff who are experts at their trade.

**Service and reliability
at an attractive price.**





MORE RELIABILITY AND SAFETY WHEN WEIGHING

An important part of your business success is the assurance of the quality of your products. A recognised quality management system is therefore an absolute prerequisite in the world of measuring and weighing.

QM standards and QM guidelines - such as ISO 9001, VDA 6.1, ISO 10012, IATF 16949, ISO 17025 and the GLP/GMP regulations - require that reproducible measurement results be ensured by means of reliable, operational measuring and test equipment, including balances and standards (calibration and test weights).

Documented inspection equipment monitoring is therefore an important obligation and relieves you of the burden of product liability and due diligence as necessary evidence.

HÄFNER, as one of the world's leading manufacturers of weights, offers you the following services for test sequence and test equipment planning expertise and experience;

- ✓ Know-how and experience,
- ✓ Advice and competence,
- ✓ highest precision and quality,
- ✓ Flexibility and special requests,
- ✓ Service and reliability

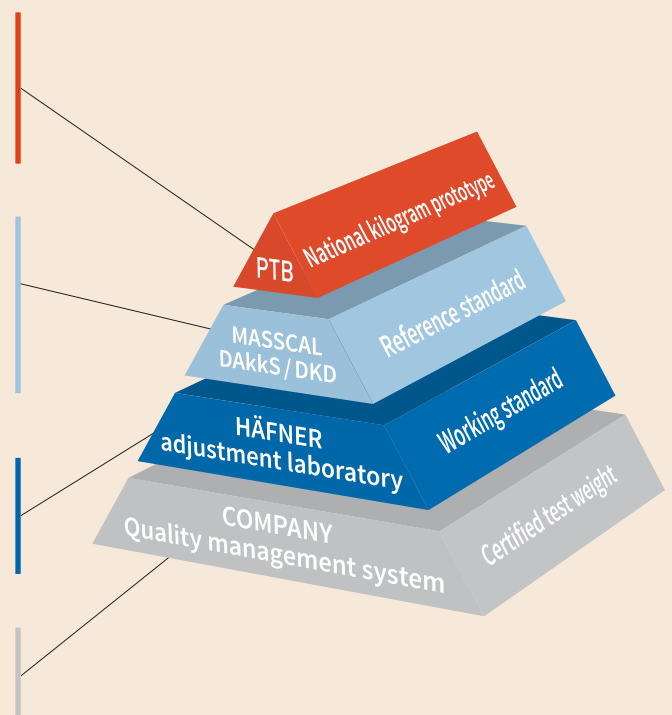
TRACEABILITY TO THE NATIONAL WEIGHT STANDARD

The Physikalisch Technische Bundesanstalt (PTB) is the metrological state institute in Germany and provides access to the physical SI mass standards. It has the mandate and the task to keep available and to forward the national weight standards (e.g. for mass).

Our calibration laboratory MASSCAL is accredited as a calibration laboratory by the DAKKS (Reg. No. D-K-15192-01-00). The internationally valid DAKKS calibration certificates meet the requirements for test equipment monitoring and serve as evidence for metrological traceability to the national weight standard.

HÄFNER works with a quality management system and is certified to EN ISO 9001:2015 by DQS (Reg. No.059 993 QM15). Working and utility standards are traceable to national standards through accredited calibrations.

In the world of measuring and weighing, a certified quality management system is essential as a basis for ensuring the quality of your products.



MASSCAL CALIBRATION AND ADJUSTMENT LABORATORY

HÄFNER has the spacious adjustment and calibration laboratory "MASSCAL", which meets the highest metrological demands. With high investments, we keep our measuring equipment at the cutting edge of technology.

Our calibration laboratory "MASSCAL" (D-K-15192-01-00) complies with the international standard DIN EN ISO/IEC 17025:2018 and is accredited by the Deutsche Akkreditierungsstelle GmbH (DAkKS) up to and including the highest tolerance class E1 according to OIML R111-1 : 2004. This gives our calibration certificates international recognition.

The DAkKS-accredited calibration certificate documents the metrological traceability to national standards for the representation of units in accordance with the International System of Units (SI).

MASSCAL Calibration laboratory for mass <i>Kalibrierlaboratorium für Masse</i>		 THE PERFECT WEIGHT				
accredited according to DIN EN ISO/IEC 17025:2018 <i>German translation of ISO/IEC 17025:2017</i>		 				
Member of the / Mitglied im Deutschen Kalibrierdienst						
Calibration certificate <i>Kalibrierschein</i>		Calibration mark <i>Kalibrierzeichen</i>				
		<table border="1"> <tr> <td>134039</td> </tr> <tr> <td>D-K-15192-01-00</td> </tr> <tr> <td>2021-11</td> </tr> </table>		134039	D-K-15192-01-00	2021-11
134039						
D-K-15192-01-00						
2021-11						
Object <i>Gegenstand</i>	weight of 10 kg <i>Gewichtstück von 10 kg</i>	This calibration certificate documents the metrological traceability to national standards, which realize the units of measurement according to the International System of Units (SI). The DAkKS is signatory to the multilateral agreements of the European co-operation for Accreditation (EA) and of the International Laboratory Accreditation Cooperation (ILAC) for the mutual recognition of calibration certificates. The user is obliged to have the object recalibrated at appropriate intervals. <i>Dieser Kalibrierschein dokumentiert die metrologische Rückführbarkeit auf nationale Normale zur Darstellung der Einheiten in Übereinstimmung mit dem Internationalen Einheitensystem (SI).</i> <i>Der DAkKS ist Unterzeichner der multilateralen Übereinkommen der European co-operation for Accreditation (EA) und der International Laboratory Accreditation Cooperation (ILAC) zur gegenseitigen Anerkennung der Kalibrierscheine.</i> <i>Für die Einhaltung einer angemessenen Frist zur Wiederholung der Kalibrierung ist der Benutzer verantwortlich.</i>				
Manufacturer <i>Hersteller</i>	Häfner Gewichte GmbH Hohenhardtsweiler Str. 4 74420 Oberrot					
Type <i>Typ</i>	Class F1, see page 2 <i>Klasse F1, siehe Seite 2</i>					
Serial number <i>Fabr./Ser.-Nr.</i>	1161121					
Ident number <i>Ident Nr.</i>	CP123345					
Customer <i>Auftraggeber</i>	Sample Company					
Order No. <i>Auftragsnummer</i>	177120					
Number of Pages of the certificate <i>Anzahl der Seiten des Kalibrierscheines</i>	4					
Date of calibration <i>Datum der Kalibrierung</i>	02.11.2021					
This calibration certificate may not be reproduced other than in full except with the permission of the issuing laboratory. Calibration certificates are not valid without the full name and signature of the approval responsible person. <i>Dieser Kalibrierschein darf nur vollständig und unverändert weiterverbreitet werden. Auszüge oder Änderungen bedürfen der Genehmigung des ausstellenden Kalibrierlaboratoriums. Kalibrierscheine sind ohne Nennung und Unterschrift des für die Freigabe Verantwortlichen nicht gültig.</i>						
Date <i>Datum</i>		Approval of the calibration certificate by <i>Freigabe des Kalibrierscheines durch</i>				
03.11.2022		Person in charge <i>Bearbeiter</i>				
		U. Rost				
T. Al-Bulushi						
MASSCAL Hohenhardtsweiler Str. 4 D-74420 Oberrot-Germany		DAkKS/DKD Calibration Laboratory for Mass Fon +49-7977-9701-0 Internet http://www.haefner.de Telefax +49-7977-9701-99 e-mail info@haefner.de				

Sample: Page 1 of a DAkKS-accredited calibration certificate

HOW TO DETERMINE THE NECESSARY TEST WEIGHTS

MAXIMUM TOLERANCE FOR WEIGHTS ACCORDING TO OIML R111:2004 ASTM E617

Nominal value	E1	E2	F1	F2	M1	M1-2	M2	M2-3	M3	Class 0	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7
	± mg	± mg	± mg	± mg	± mg	± mg	± mg	± mg	± mg	± mg	± mg	± mg	± mg	± mg	± mg	± mg	± mg
1 mg	0,003	0,006	0,020	0,06	0,20					0,005	0,010	0,014	0,025	0,050	0,050	0,10	
2 mg	0,003	0,006	0,020	0,06	0,20					0,005	0,010	0,014	0,025	0,050	0,060	0,20	
5 mg	0,003	0,006	0,020	0,06	0,20					0,005	0,010	0,014	0,028	0,055	0,080	0,20	
10 mg	0,003	0,008	0,025	0,08	0,25					0,005	0,010	0,014	0,030	0,060	0,10	0,50	0,4
20 mg	0,003	0,010	0,03	0,10	0,3					0,005	0,010	0,014	0,035	0,070	0,12	0,50	0,56
50 mg	0,004	0,012	0,04	0,12	0,4					0,005	0,010	0,014	0,042	0,085	0,16	0,50	0,88
100 mg	0,005	0,016	0,05	0,16	0,5		1,6			0,005	0,010	0,025	0,050	0,10	0,20	1	1,2
200 mg	0,006	0,020	0,06	0,20	0,6		2,0			0,005	0,010	0,025	0,060	0,12	0,26	1	1,8
500 mg	0,008	0,025	0,08	0,25	0,8		2,5			0,005	0,010	0,025	0,080	0,16	0,38	1	3,0
1 g	0,010	0,030	0,10	0,3	1,0		3,0		10	0,017	0,034	0,054	0,10	0,20	0,50	2	4,5
2 g	0,012	0,040	0,12	0,4	1,2		4,0		12	0,017	0,034	0,054	0,13	0,26	0,75	2	7,0
5 g	0,016	0,050	0,16	0,5	1,6		5,0		16	0,017	0,034	0,054	0,18	0,36	1,3	2	13
10 g	0,020	0,060	0,20	0,6	2,0		6,0		20	0,025	0,050	0,074	0,25	0,50	2,0	2	21
20 g	0,025	0,080	0,25	0,8	2,5		8,0		25	0,037	0,074	0,10	0,35	0,70	3,0	3	33
50 g	0,030	0,10	0,3	1,0	3,0		10		30	0,060	0,12	0,25	0,60	1,2	5,6	7	
100 g	0,05	0,16	0,5	1,6	5		16		50	0,13	0,25	0,50	1,0	2,0	9	10	100
200 g	0,10	0,30	1,0	3,0	10		30		100	0,25	0,5	1,0	2,0	4,0	15	20	160
500 g	0,25	0,80	2,5	8,0	25		80		250	0,60	1,2	2,5	5,0	10	30	50	300
1 kg	0,5	1,6	5	16	50		160		500	1,3	2,5	5,0	10	20	50	100	470
2 kg	1,0	3,0	10	30	100		300		1.000	2,5	5	10	20	40	100	200	750
5 kg	2,5	8,0	25	80	250		800		2.500	6	12	25	50	100	250	500	1,4g
10 kg	5	16	50	160	500		1.600		5.000	13	25	50	100	200	500	1g	2,2g
20 kg	10	30	100	300	1.000		3.000		10.000	25	50	100	200	400	1,0g	2g	3,8g
50 kg	25	80	250	800	2.500	5.000	8.000	16.000	25.000	63	125	250	500	1,0g	2,5g	5g	7,5g
		± g	± g	± g	± g	± g	± g	± g	± g	± g	± g	± g	± g	± g	± g	± g	± g
100 kg		0,16	0,5	1,6	5	10	16	30	50					2,0	5	10	15
200 kg		0,30	1,0	3,0	10	20	30	60	100					4,0	10	20	30
500 kg		0,80	2,5	8,0	25	50	80	160	250					10	25	50	75
1.000 kg		1,6	5	16	50	100	160	300	500					20	50	100	150
2.000 kg			10	30	100	200	300	600	1.000					40	100	200	300
5.000 kg			25	80	250	500	800	1.600	2.500					100	250	500	750

All weights are also available in ASTM classes. Prices correspond to the parallel OIML class.

DEFAULT DENSITIES FOR WEIGHT MATERIALS

Ident.	Material	Density at 68°F kg/m³	Density uncertainty U(k=2) kg/m³
GG	Cast iron	7200	400
ST	Steel	7800	200
AL	Aluminium	2700	120
NS	German silver nickel	8600	170
MS	Brass finely turned	8400	100
MSN	Brass nickel plated	8400	100
MSM	Brass miralloy	8400	100
VA	Stainless steel	7900	140
HF12	austenit stainless steel	7950	80
HE210	Special stainless steel	8000	30

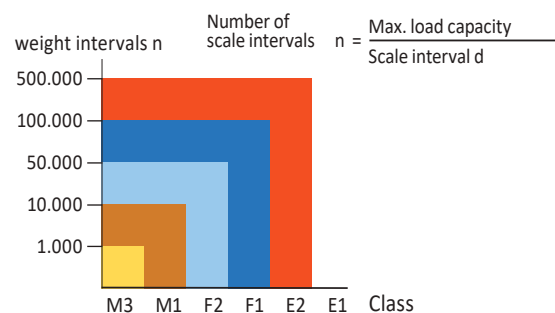
LIMITS OF MAGNETIC CHARACTERISTICS

Class	Magnetization μOM (μT)	Magnetic susceptibility X m ≤ 1 g	2 g ≤ m ≤ 10 g	m ≤ 20 g
E1	< 2,5	< 0,25	< 0,06	< 0,02
E2	< 8	< 0,9	< 0,18	< 0,07
F1	< 25	< 10	< 0,7	< 0,2
F2	< 80	-	< 4	< 0,8
M1	< 250	-	-	-
M1-2	< 500	-	-	-
M2	< 800	-	-	-
M2-3	< 1600	-	-	-
M3	< 2500	-	-	-

A balance has a maximum rated capacity of 1,000 g and a scale division d of 10 mg. The user manual specifies an external calibration weight with a nominal value of 1 kg. According to step A.1, the number of scale intervals that the balance can measure is 100,000.

According to step A.2, the required tolerance with a nominal weight of 1 kg is between 5 and 10 mg. Tolerance class F1 meets this requirement (± 5 mg).

The following test loads are determined in step B.2: 250 g, 500 g, 750 g and 1 kg. According to OIML R111 the following four test weights in the class F1 are determined: 50 g, 200 g, 500 g and 1 kg.



Accuracy of the balance (scale)	Resolution of the balance: quotient of max. range / readability	Required tolerance class of the weights
IV Ordinary accuracy scale	$\leq 1.000 d$	Class M3
III Medium accuracy scale	$\leq 10.000 d$	Class M1
II Precision balance	$\leq 50.000 d$	Class F2
	$\leq 100.000 d$	Class F1
I Analytical balance	$> 100.000 d$	Class E2

A.

DETERMINE THE RIGHT TOLERANCE CLASS FOR THE TEST WEIGHTS

1. Determine the number of intervals n by dividing the maximum weight by the scale division d (smallest reading digit) of the weighing range (measuring range).

$$\text{Number of steps } n = \frac{\text{Max. load capacity}}{\text{Scale interval d}}$$

2. Determine the tolerance class of the test weights from the required tolerance.

Weighing range (measuring range)	Tolerance of the test weight, depending on the safety requirement
$n = 100.000$	0,5 d and 1 d
$100.000 < n < 500.000$	Between 1 d and 2 d
$n > 500.000$	less than 3 d

For this, choose a nominal value equal or close to the maximum value of the weighing range (measuring range). This nominal value should always be greater than 80% of the maximum rated capacity.

You can round up or down by a small amount. In case of doubt you should always choose the next smaller tolerance.

B.

DETERMINE THE REQUIRED NOMINAL VALUES (WEIGHTS)

1. cursory testing

You can make most of the test measurements for the weighing range with just one test weight (nominal value). The nominal value of the external calibration weight is often used for this purpose (consult the user guide or operating software of your balance). This nominal value should always be greater than 80% of the maximum rated capacity.

2. Complete testing

Use this method to check the weighing range (measuring range) against the maximum potential requirements. The following four test loads are required: 25%, 50%, 75% and 100% (or at least 80%) of the maximum rated capacity.

The test weight for 100% (or at least 80%) of the maximum rated capacity should consist of just one weight, rather than a combination of several test weights.

If you have any questions, we would be pleased to advise you on choosing suitable test weights for your measuring or test task. We support you in the specification of test plans and give you recommendations about appropriate documentation and interpretation of your test results.

Composition of the standard weight sets

mg g kg																														
Weight set	1	2	2	5	10	20	20	50	100	200	200	500	1	2	2	5	10	20	20	50	100	200	200	500	1	2	2	5	10	Content:
1 mg - 50 g																														110,00 g 111,11 g
1 mg - 100 g																														210,00 g 211,11 g
1 mg - 200 g																														610,00 g 611,11 g
1 mg - 500 g																														1110,00 g 1111,11 g
1 mg - 1 kg																														2110,00 g 2111,11 g
1 mg - 2 kg																														6110,00 g 6111,11 g
1 mg - 5 kg																														11110,00 g 11111,11 g
1 mg - 10 kg																														21110,00 g 21111,11 g

ADVICES FOR RELIABLE MEASURING RESULTS

Reliable, constant weighing and measuring results require compliance with the following rules:

1. Balances and measuring systems must be monitored and maintained competently. The metrological properties must be familiar.
2. Balances and measuring systems must be adjusted regularly – depending on frequency of use – with adjustment and test weights and must also be calibrated according to an acknowledged test method.
3. The adjustment and test weights you use must be traceable back to national normal weights, this is, they must be calibrated regularly.
4. The test and calibration results must be documented together with their uncertainty of measurement (e.g. by a protocol of the test for scales and a DAkkS calibration certificate for weights.)
5. Test and calibration results must be evaluated. The test and calibration periods for scales and weights must be determined and be controlled with a test plan.
6. Test protocols or calibration certificates must be kept for a sufficient long time.

Increase your competitiveness. The confidence of your customers is important.

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SILICON-KG

WORLDWIDE ONLY AVAILABLE BY HÄFNER

THE NEW KILOGRAM

MADE BY NATURAL SILICON SPHERES

The redefinition of the SI unit kilogram is closely linked to the necessity of an appropriate dissemination of this unit by means of mass standards.

Due to its material properties, robustness and easy handling, silicon is very well suited in comparison to other considered materials. At PTB, a procedure for the manufacture, handling, storage, transportation, cleaning and metrological assessment was developed and tested.

PTB together with two industrial cooperation partners are participating in this "Si-kg" project with the aim to make silicon spheres and procedures available for a broader use.



HAUSER OPTIK
precision in silicon



Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin





AVOGADRO CONSTANT N_A

PLANCK CONSTANT h

BASED ON FUNDAMENTAL CONSTANTS

MASS-PRIMARY-NORMAL - SILICON SPHERES

Material	High-purity, monocrystalline, natural silicon, consisting of 3 isotopes: ^{28}Si (approx. 92%), ^{29}Si (approx. 5%), ^{30}Si (approx. 3%)
Nominal value*	1 kg
Diameter	approx. 93,6 mm
Density	approx. 2329 kg/mm ³

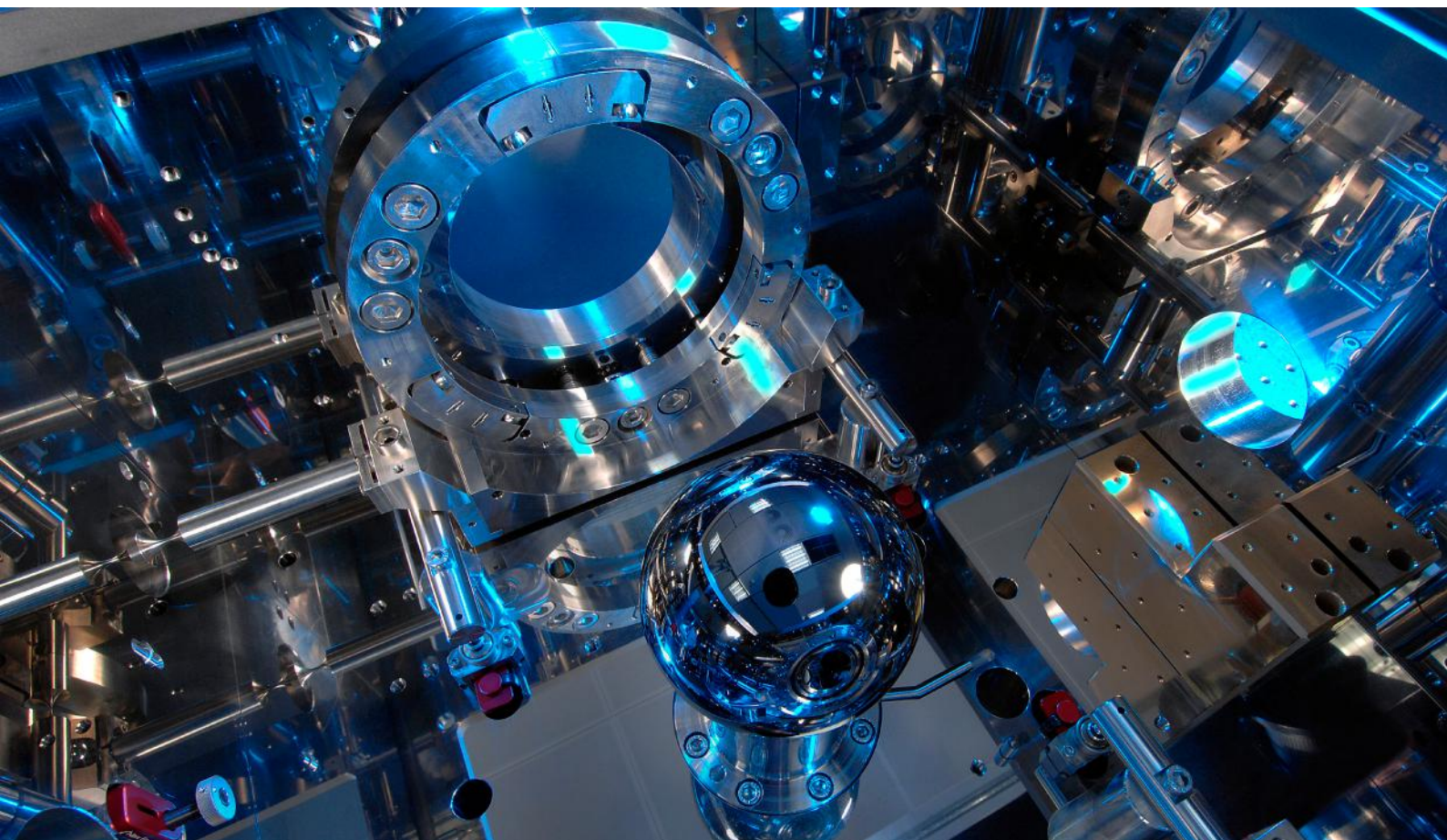
SPECIFICATIONS

	Special secondary sphere (sc++)	Secondary sphere (sc)
Mass tolerance Δm	0 / +200 mg	0 / +200 mg
Form deviation RONT	< 20 nm	< 80 nm
Surface roughness Ra	< 0,3 nm	< 1 nm

CALIBRATION CERTIFICATE (PTB)

Measurement uncertainties U(k=2)	Special secondary sphere (sc++)	Secondary sphere (sc)
Mass in vacuum	25 μg	45 μg
Mass in air	50 μg	55 μg
Roundness	2,5 nm	50 nm, optional
Diameter	0,3 nm	-
Volume in vacuum	0,010 mm ³	-
Volume in air	0,014 mm ³	0,8 mm ³
Density	0,004 kg/m ³	0,004 kg/m ³
Surface roughness	0,15 nm	0,15, optional
Layer thickness	0,4 nm, optional	-

* Other nominal values possible on request



VOLUME AND DENSITY PRIMARY NORMALS - SILICON SPHERES

SPECIFICATIONS

Nominal values*	1 kg	500 g	200 g	100 g	50 g	20 g
Diameter in mm	ca. 93,6	ca. 74,3	ca. 54,7	ca. 43,4	ca. 34,5	ca. 25,4
Material	High-purity, monocrystalline, natural silicon, consisting of 3 isotopes: ²⁸ Si (approx. 92%), ²⁹ Si (approx. 5%), ³⁰ Si (approx. 3%)					
Density	approx. 2329 kg/mm ³					
Mass tolerance Δm	0 / +200 mg					
Form deviation RONT	< 1 μm					
Surface roughness Ra	< 10 nm					

CALIBRATION CERTIFICATE (PTB)

Measurement uncertainties U(k=2)	1 kg	500 g	200 g	100 g	50 g	20 g
Mass in air	0,10 mg	0,50 mg	0,020 mg	0,010 mg	0,006 mg	0,005 mg
Volume in air	0,0020 cm ³	0,0010 cm ³	0,0009 cm ³	0,0008 cm ³	0,0007 cm ³	0,0006 cm ³
Density	0,13 kg/m ³	0,13 kg/m ³	0,30 kg/m ³	0,50 kg/m ³	0,90 kg/m ³	1,9 kg/m ³

* Other nominal values possible on request



ACCESSORIES FOR SILICON SPHERES



SPECIAL TRANSPORT CONTAINER

for 1 kg silicon sphere, consisting of 2 parts: base part made of special aluminum with special plastic for centering, upper part made of special aluminium with a polycarbonate tube; special center screw made of plastic



TRANSPORT CASE

for housing the transport container of 1 kg silicon sphere, special aluminium frame case with hardfoam inserts, with hinged handle on the top and with lockable closure



BELL JAR

with base for 1 kg silicon sphere, consisting of special aluminum base, special glass bell (plane grinded) and sphere seat (made of PEEK), for storage in the laboratory



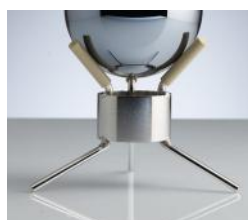
SPECIAL TRANSPORT CONTAINER

inspection plate made of anodized special aluminum, with polished sphere holder made of PEEK and with bell jar for 1 kg silicon sphere, with built-in rotatable plate for surface inspection



SPECIAL LED TORCH

for inspection of silicon spheres, special air bulb with built-in air filter, for safe cleaning of dust particles



SPHERE HOLDER

tripod as cleaning aid, made of special stainless steel, electrolytically polished, with polished PEEK caps



HI-TECH PADS D 60 MM

for silicon spheres, used as underlay in various sphere accessories, knitted cloth, ultrasonic, poured and washed, package (10 pieces)



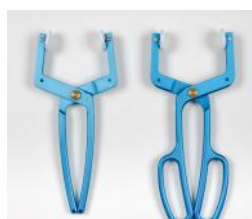
HI-TECH PADS D 100 MM

for silicon spheres, used for cleaning and as underlay in various sphere accessories, knitted cloth, laser-cut, poured and washed, package (10 pieces)



SPECIAL FORK

for handling 1 kg silicon sphere, handle made of anodized aluminum, support plate made of polished PEEK



SPECIAL TONG

for handling 1 kg silicon sphere, with spherical, self-centering jaws, which are covered with special microfiber caps, with smooth or bow handles



HI-TECH CLEANING WIPES

for silicon spheres, 40 x 40 cm, knitted cloth, laser-cut, poured and washed, package (10 pieces)



SPECIAL NITRILE GLOVES

for use in the cleaning of silicon sphere, 100% nitrile, powder- and silicone free, recommended by PTB, sizes S, M, L and XL available, package (100 pieces)



SPECIAL MICROFIBER GLOVES

high-purity model, in pairs, sizes S and L available



CLEANING CONCENTRATE

deconex, pH neutral, salt-free cleaning concentrate, used for the very gentle cleaning of silicon spheres, 2 % dosage in distilled water is recommended, available container sizes: 1 l and 10 l

E0

Primary and Secondary Mass Standards of Class E0

As a national mass standard and /or for representing the national mass scale up to 50 kg.
For the calibration of mass standards of the classes E1.

Weights in the exclusive assortment case.

ACCESSORIES



All weight sets include gloves, two brushes and two tweezers.

Up to 50 g without big tweezers, big brush and gloves.



CLEAN ROOM
PLASTIC CASES



MAHOGANY
WOODEN BOX



SERVICE
CASE



CLEAN ROOM CASE
removeable inserts



PLASTIC BOXES
WITH SCREWED TOP



DOUBLE-GLAZED
BELL JAR



Primary standard weight

Cylinder shape

highly polished

SINGLE WEIGHT

Nominal value	Tol.		with double-glazed bell jar and a special transport box	PTB Calibration certificate U=1/5 E1 *	PTB Calibration certificate U=50 µg
	+/- mg		Art.no.	Art.no.	Art.no.
1 kg	0,15	Special stainless steel HE210	11.ZBHS-210	10.0000-216	11.0000-216
1 kg	0,15	Platin iridium	11.ZYHS-210		

Milligramm weights

SPECIAL STAINLESS STEEL HE210

Wire shape

highly polished

SINGLE WEIGHT



Nominal value	Tol.	without box	 Clean room plastic cases	 Mahogany wooden box	PTB Calibration certificate U=1/5 E1 *
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.
1 mg	0,0015	10.DBHO-010	10.DBHP-010	10.DBHM-010	10.0000-016
2 mg	0,0015	10.DBHO-020	10.DBHP-020	10.DBHM-020	10.0000-026
5 mg	0,0015	10.DBHO-030	10.DBHP-030	10.DBHM-030	10.0000-036
10 mg	0,0015	10.DBHO-040	10.DBHP-040	10.DBHM-040	10.0000-046
20 mg	0,0015	10.DBHO-050	10.DBHP-050	10.DBHM-050	10.0000-056
50 mg	0,0020	10.DBHO-060	10.DBHP-060	10.DBHM-060	10.0000-066
100 mg	0,0025	10.DBHO-070	10.DBHP-070	10.DBHM-070	10.0000-076
200 mg	0,003	10.DBHO-080	10.DBHP-080	10.DBHM-080	10.0000-086
500 mg	0,004	10.DBHO-090	10.DBHP-090	10.DBHM-090	10.0000-096

SET

Nominal value	Quantity	without box	 Clean room plastic cases	 Mahogany wooden box **	PTB Calibration certificate U=1/5 E1 *
		Art.no.	Art.no.	Art.no.	Art.no.
1 mg – 500 mg	12	10.XDHO-710	10.XDHP-710	10.XDHM-710	10.0000-716

* U = 1/5 E1 uncertainty of measurement

** wooden box, inside plastic case with antistatic stainless steel coating, tweezer and brush



Milligramm weights

ALUMINIUM / SPECIAL STAINLESS STEEL HE210

Flat polygonal sheets



highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Clean room plastic cases	 Mahogany wooden box	PTB Calibration certificate U=1/5 E1 *
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.
1 mg	0,0015	10.PAHO-010	10.PAHP-010	10.PAHM-010	10.0000-016
2 mg	0,0015	10.PAHO-020	10.PAHP-020	10.PAHM-020	10.0000-026
5 mg	0,0015	10.PAHO-030	10.PAHP-030	10.PAHM-030	10.0000-036
10 mg	0,0015	10.PBHO-040	10.PBHP-040	10.PBHM-040	10.0000-046
20 mg	0,0015	10.PBHO-050	10.PBHP-050	10.PBHM-050	10.0000-056
50 mg	0,0020	10.PBHO-060	10.PBHP-060	10.PBHM-060	10.0000-066
100 mg	0,0025	10.PBHO-070	10.PBHP-070	10.PBHM-070	10.0000-076
200 mg	0,003	10.PBHO-080	10.PBHP-080	10.PBHM-080	10.0000-086
500 mg	0,004	10.PBHO-090	10.PBHP-090	10.PBHM-090	10.0000-096

SET

Nominal value	Quantity	without box	 Clean room plastic cases	 Mahogany wooden box **	PTB Calibration certificate U=1/5 E1 *
		Art.no.	Art.no.	Art.no.	Art.no.
1 mg – 500 mg	12	10.XPHO-710	10.XPHP-710	10.XPHM-710	10.0000-716

* U = 1/5 E1 uncertainty of measurement

** wooden box, inside plastic case with antistatic stainless steel coating, tweezer and brush



Knob weights



SPECIAL STAINLESS STEEL HE210

highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases **	 Mahogany wooden box	 Clean room case removable inserts	PTB Calibration certificate U=1/5 E1 *
+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	10.0000-Art.no.
1 g	0,005	10.MBHO-110	10.MBHD-110	10.MBHP-110	10.MBHM-110		...116
2 g	0,006	10.MBHO-120	10.MBHD-120	10.MBHP-120	10.MBHM-120		...126
5 g	0,008	10.MBHO-130	10.MBHD-130	10.MBHP-130	10.MBHM-130		...136
10 g	0,010	10.MBHO-140	10.MBHD-140	10.MBHP-140	10.MBHM-140		...146
20 g	0,012	10.MBHO-150	10.MBHD-150	10.MBHP-150	10.MBHM-150		...156
50 g	0,015	10.MBHO-160	10.MBHD-160	10.MBHP-160	10.MBHM-160		...166
100 g	0,025	10.MBHO-170	10.MBHD-170	10.MBHP-170	10.MBHM-170	10.MBHR-170	...176
200 g	0,050	10.MBHO-180	10.MBHD-180	10.MBHP-180	10.MBHM-180	10.MBHR-180	...186
500 g	0,125	10.MBHO-190	10.MBHD-190	10.MBHP-190	10.MBHM-190	10.MBHR-190	...196
1 kg	0,25	10.MBHO-210	10.MBHD-210	10.MBHP-210	10.MBHM-210	10.MBHR-210	...216
2 kg	0,5	10.MBHO-220	10.MBHD-220	10.MBHP-220	10.MBHM-220	10.MBHR-220	...226
5 kg	1,2	10.MBHO-230	10.MBHD-230	10.MBHP-230	10.MBHM-230	10.MBHR-230	...236
10 kg	2,5	10.MBHO-240	10.MBHD-240	10.MBHP-240	10.MBHM-240	10.MBHR-240	...246
20 kg	5	10.MBHO-250			10.MBHM-250	10.MBHR-250	...256
50 kg	12	10.MBHO-260			10.MBHM-260	10.MBHR-260	...266

Nominal value	Tol.				 Service case	PTB Calibration certificate U=1/5 E1 *
+/- mg					Art.-Nr.	10.0000-Art.-Nr.
5 kg	1,2				10.MBHS-230	...236
10 kg	2,5				10.MBHS-240	...246
20 kg	5				10.MBHS-250	...256
50 kg	12				10.MBHS-260	...266

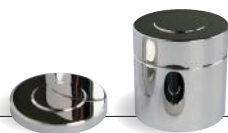
SETS

Nominal value	Qty.	Splitting up	Content	 Clean room plastic box	 Mahogany wooden box	 Service case	 Clean room case removable inserts	PTB Calibration certificate U=1/5 E1 *
				Art.no.	Art.no.	Art.no.	Art.no.	10.0000-Art.no.
1 g–5 g	3	1, 2, 5 g	8 g	10.XTHP-530	10.XTHM-530	10.XTHS-530	10.XTHR-530	...536
10 g–50 g	3	10, 20, 50 g	80 g	10.XTHP-650	10.XTHM-650	10.XTHS-650	10.XTHR-650	...656
100 g–500 g	3	100, 200, 500 g	800 g	10.XTHP-660	10.XTHM-660	10.XTHS-660	10.XTHR-660	...666
100 g–1 kg	4	100, 200, 500, ...	1.800 g	10.XTHP-670	10.XTHM-670	10.XTHS-670	10.XTHR-670	...676
1 g–1 kg	10	1, 2, 5, ...	1.888 g	10.XTHP-610	10.XTHM-610	10.XTHS-610	10.XTHR-610	...616
1 kg–5 kg	3	1, 2, 5 kg	8.000 g	10.XTHP-680	10.XTHM-680	10.XTHS-680	10.XTHR-680	...686
2 kg–10 kg	3	2, 5, 10, kg	17.000 g	10.XTHP-690	10.XTHM-690	10.XTHS-690	10.XTHR-690	...696
1 g–10 kg	13	1, 2, 5, ...	18.888 g	10.XTHP-640	10.XTHM-640	10.XTHS-640	10.XTHR-640	...646

* U = 1/5 E1 uncertainty of measurement

** up from 100 g in a plastic case with foam insert

Disc weights



SPECIAL STAINLESS STEEL HE210

highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases **	 Mahogany wooden box	 Clean room case removeable inserts	PTB Calibration certificate U=1/5 E1 *
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	10.0000- Art.no.
1 g	0,005	10.SBHO-110	10.SBHD-110	10.SBHP-110	10.SBHM-110		...116
2 g	0,006	10.SBHO-120	10.SBHD-120	10.SBHP-120	10.SBHM-120		...126
5 g	0,008	10.SBHO-130	10.SBHD-130	10.SBHP-130	10.SBHM-130		...136
10 g	0,010	10.SBHO-140	10.SBHD-140	10.SBHP-140	10.SBHM-140		...146
20 g	0,012	10.SBHO-150	10.SBHD-150	10.SBHP-150	10.SBHM-150		...156
50 g	0,015	10.SBHO-160	10.SBHD-160	10.SBHP-160	10.SBHM-160		...166
100 g	0,025	10.SBHO-170	10.SBHD-170	10.SBHP-170	10.SBHM-170	10.SBHR-170	...176
200 g	0,050	10.SBHO-180	10.SBHD-180	10.SBHP-180	10.SBHM-180	10.SBHR-180	...186
500 g	0,125	10.SBHO-190	10.SBHD-190	10.SBHP-190	10.SBHM-190	10.SBHR-190	...196
1 kg	0,25	10.SBHO-210	10.SBHD-210	10.SBHP-210	10.SBHM-210	10.SBHR-210	...216
2 kg	0,5	10.SBHO-220	10.SBHD-220	10.SBHP-220	10.SBHM-220	10.SBHR-220	...226
5 kg	1,2	10.SBHO-230	10.SBHD-230	10.SBHP-230	10.SBHM-230	10.SBHR-230	...236
10 kg	2,5	10.SBHO-240	10.SBHD-240	10.SBHP-240	10.SBHM-240	10.SBHR-240	...246
20 kg	5	10.SBHO-250			10.SBHM-250	10.SBHR-250	...256
50 kg	12	10.SBHO-260			10.SBHM-260	10.SBHR-260	...266

Nominal value	Tol.				 Service case	PTB Calibration certificate U=1/5 E1 *
	+/- mg				Art.no.	10.0000- e Art.no.
5 kg	1,2				10.SBHS-230	...236
10 kg	2,5				10.SBHS-240	...246
20 kg	5				10.SBHS-250	...256
50 kg	12				10.SBHS-260	...266

SETS

Nominal value	Qty.	Splitting up	Content	 Clean room plastic box	 Mahogany wooden box	 Service case	 Clean room case removeable inserts	PTB Calibration certificate U=1/5 E1 *
				Art.no.	Art.no.	Art.no.	Art.no.	10.0000- Art.no.
1 g–5 g	3	1, 2, 5 g	8 g	10.XSHP-530	10.XSHM-530	10.XSHS-530	10.XSHR-530	...536
10 g–50 g	3	10, 20, 50 g	80 g	10.XSHP-650	10.XSHM-650	10.XSHS-650	10.XSHR-650	...656
100 g–500 g	3	100, 200, 500 g	800 g	10.XSHP-660	10.XSHM-660	10.XSHS-660	10.XSHR-660	...666
100 g–1 kg	4	100, 200, 500, ...	1.800 g	10.XSHP-670	10.XSHM-670	10.XSHS-670	10.XSHR-670	...676
1 g–1 kg	10	1, 2, 5, ...	1.888 g	10.XSHP-610	10.XSHM-610	10.XSHS-610	10.XSHR-610	...616
1 kg–5 kg	3	1, 2, 5 kg	8.000 g	10.XSHP-680	10.XSHM-680	10.XSHS-680	10.XSHR-680	...686
2 kg–10 kg	3	2, 5, 10, kg	17.000 g	10.XSHP-690	10.XSHM-690	10.XSHS-690	10.XSHR-690	...696
1 g–10 kg	13	1, 2, 5, ...	18.888 g	10.XSHP-640	10.XSHM-640	10.XSHS-640	10.XSHR-640	...646

* U = 1/5 E1 uncertainty of measurement

** up from 100 g in a plastic case with foam insert

E1

Reference Mass Standards and Weights of Class E1

Adjustment, testing and calibration instrument within the quality assurance of balances with steps → 1 000 000 according to DIN EN ISO 9001ff etc. For calibration of weights of the class E2 according to OIML R111. Within high-precision weighing or comparisons weight on mass comparators.



Weights in the exclusive assortment case.

ACCESSORIES



All weight sets include gloves, two brushes and two tweezers.
Up to 50 g without big tweezers, big brush and gloves.



CLEAN ROOM
PLASTIC CASES



MAHOGANY
WOODEN BOX



SERVICE
CASE



CLEAN ROOM CASE
removeable inserts



PLASTIC BOXES
WITH SCREWED TOP

Milligramm weights

SPECIAL STAINLESS STEEL HE210

Wire shape



highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	 Mahogany wooden box	PTB Calibration certificate	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
1 mg	0,003	9.DBHO-010	9.DBHD-010	9.DBHP-010	9.DAHM-010	...016	...011
2 mg	0,003	9.DBHO-020	9.DBHD-020	9.DBHP-020	9.DAHM-020	...026	...021
5 mg	0,003	9.DBHO-030	9.DBHD-030	9.DBHP-030	9.DAHM-030	...036	...031
10 mg	0,003	9.DBHO-040	9.DBHD-040	9.DBHP-040	9.DBHM-040	...046	...041
20 mg	0,003	9.DBHO-050	9.DBHD-050	9.DBHP-050	9.DBHM-050	...056	...051
50 mg	0,004	9.DBHO-060	9.DBHD-060	9.DBHP-060	9.DBHM-060	...066	...061
100 mg	0,005	9.DBHO-070	9.DBHD-070	9.DBHP-070	9.DBHM-070	...076	...071
200 mg	0,006	9.DBHO-080	9.DBHD-080	9.DBHP-080	9.DBHM-080	...086	...081
500 mg	0,008	9.DBHO-090	9.DBHD-090	9.DBHP-090	9.DBHM-090	...096	...091

SET

Nominal value	Qty.	Content	 Clean room plastic cases	 Mahogany wooden box *	PTB Calibration certificate	DAkks Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 mg – 500 mg	12	1,11 g	9.XEHP-710	9.XEHM-710	9.0000-716	9.0000-711

* wooden box, inside plastic case with antistatic stainless steel coating, tweezer and brush

Milligramm weights

ALUMINIUM / SPECIAL STAINLESS STEEL HE210

Flat polygonal sheets



highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	 Mahogany wooden box	PTB Calibration certificate	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
1 mg *	0,003	9.PAHO-010	9.PAHD-010	9.PAHP-010	9.PAHM-010	...016	...011
2 mg *	0,003	9.PAHO-020	9.PAHD-020	9.PAHP-020	9.PAHM-020	...026	...021
5 mg *	0,003	9.PAHO-030	9.PAHD-030	9.PAHP-030	9.PAHM-030	...036	...031
10 mg	0,003	9.PBHO-040	9.PBHD-040	9.PBHP-040	9.PBHM-040	...046	...041
20 mg	0,003	9.PBHO-050	9.PBHD-050	9.PBHP-050	9.PBHM-050	...056	...051
50 mg	0,004	9.PBHO-060	9.PBHD-060	9.PBHP-060	9.PBHM-060	...066	...061
100 mg	0,005	9.PBHO-070	9.PBHD-070	9.PBHP-070	9.PBHM-070	...076	...071
200 mg	0,006	9.PBHO-080	9.PBHD-080	9.PBHP-080	9.PBHM-080	...086	...081
500 mg	0,008	9.PBHO-090	9.PBHD-090	9.PBHP-090	9.PBHM-090	...096	...091

* 1 mg - 5 mg made of aluminium

SET

Nominal value	Qty.	Content	 Clean room plastic cases	 Mahogany wooden box	PTB Calibration certificate	DAkks Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 mg – 500 mg	12	1,11 g	9.XNHP-710	9.XNHM-710	9.0000-716	9.0000-711

Knob weights



SPECIAL STAINLESS STEEL HE210

highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases *	 Mahogany wooden box	PTB Calibration certificate	DAKKS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
1 g	0,010	9.MBHO-110	9.MBHD-110	9.MBHP-110	9.MBHM-110	...116	...111
2 g	0,012	9.MBHO-120	9.MBHD-120	9.MBHP-120	9.MBHM-120	...126	...121
5 g	0,016	9.MBHO-130	9.MBHD-130	9.MBHP-130	9.MBHM-130	...136	...131
10 g	0,020	9.MBHO-140	9.MBHD-140	9.MBHP-140	9.MBHM-140	...146	...141
20 g	0,025	9.MBHO-150	9.MBHD-150	9.MBHP-150	9.MBHM-150	...156	...151
50 g	0,03	9.MBHO-160	9.MBHD-160	9.MBHP-160	9.MBHM-160	...166	...161
100 g	0,05	9.MBHO-170	9.MBHD-170	9.MBHP-170	9.MBHM-170	...176	...171
200 g	0,10	9.MBHO-180	9.MBHD-180	9.MBHP-180	9.MBHM-180	...186	...181
500 g	0,25	9.MBHO-190	9.MBHD-190	9.MBHP-190	9.MBHM-190	...196	...191
1 kg	0,5	9.MBHO-210	9.MBHD-210	9.MBHP-210	9.MBHM-210	...216	...211
2 kg	1,0	9.MBHO-220	9.MBHD-220	9.MBHP-220	9.MBHM-220	...226	...221
5 kg	2,5	9.MBHO-230	9.MBHD-230	9.MBHP-230	9.MBHM-230	...236	...231
10 kg	5	9.MBHO-240	9.MBHD-240	9.MBHP-240	9.MBHM-240	...246	...241
20 kg	10	9.MBHO-250			9.MBHM-250	...256	...251
50 kg	25	9.MBHO-260			9.MBHM-260	...266	...261

Nominal value	Tol.		 Clean room case removeable inserts	 Service case	PTB Calibration certificate	DAKKS Calibration certificate
	+/- mg		Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
100 g	0,05		9.MBHR-170		...176	...171
200 g	0,10		9.MBHR-180		...186	...181
500 g	0,25		9.MBHR-190		...196	...191
1 kg	0,5		9.MBHR-210		...216	...211
2 kg	1,0		9.MBHR-220		...226	...221
5 kg	2,5		9.MBHR-230	9.MBHS-230	...236	...231
10 kg	5		9.MBHR-240	9.MBHS-240	...246	...241
20 kg	10		9.MBHR-250	9.MBHS-250	...256	...251
50 kg	25		9.MBHR-260	9.MBHS-260	...266	...261

* up from 100 g in a plastic case with foam insert



Knob weights



SPECIAL STAINLESS STEEL HE210

highly polished

SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Mahogany wooden box	PTB Calibration certificate	DAkks Calibration certificate
			Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
1 g – 50 g	8	110 g	9.XTHP-560	9.XTHM-560	...566	...561
1 g – 100 g	9	210 g	9.XTHP-570	9.XTHM-570	...576	...571
1 g – 200 g	11	610 g	9.XTHP-580	9.XTHM-580	...586	...581
1 g – 500 g	12	1.110 g	9.XTHP-590	9.XTHM-590	...596	...591
1 g – 1 kg	13	2.110 g	9.XTHP-610	9.XTHM-610	...616	...611
1 g – 2 kg	15	6.110 g	9.XTHP-620	9.XTHM-620	...626	...621
1 g – 5 kg	16	11.110 g	9.XTHP-630	9.XTHM-630	...636	...631
1 g – 10 kg	17	21.110 g	9.XTHP-640	9.XTHM-640	...646	...641
10 g – 50 g	3	80 g	9.XTHP-650	9.XTHM-650	...656	...651
100 g – 500 g	3	800 g	9.XTHP-660	9.XTHM-660	...666	...661
100 g – 1 kg	4	1.800 g	9.XTHP-670	9.XTHM-670	...676	...671
1 kg – 5 kg	4	10.000 g	9.XTHP-680	9.XTHM-680	...686	...681
2 kg – 10 kg	3	17.000 g	9.XTHP-690	9.XTHM-690	...696	...691

Nominal value	Qty.	Content	 Service case	 Clean room case removeable inserts	PTB Calibration certificate	DAkks Calibration certificate
			Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
1 g – 50 g	8	110 g		9.XTHR-560	...566	...561
1 g – 100 g	9	210 g	9.XTHS-570	9.XTHR-570	...576	...571
1 g – 200 g	11	610 g	9.XTHS-580	9.XTHR-580	...586	...581
1 g – 500 g	12	1.110 g	9.XTHS-590	9.XTHR-590	...596	...591
1 g – 1 kg	13	2.110 g	9.XTHS-610	9.XTHR-610	...616	...611
1 g – 2 kg	15	6.110 g	9.XTHS-620	9.XTHR-620	...626	...621
1 g – 5 kg	16	11.110 g	9.XTHS-630	9.XTHR-630	...636	...631
1 g – 10 kg	17	21.110 g	9.XTHS-640	9.XTHR-640	...646	...641
10 g – 50 g	3	80 g	9.XTHS-650	9.XTHR-650	...656	...651
100 g – 500 g	3	800 g	9.XTHS-660	9.XTHR-660	...666	...661
100 g – 1 kg	4	1.800 g	9.XTHS-670	9.XTHR-670	...676	...671
1 kg – 5 kg	4	10.000 g	9.XTHS-680	9.XTHR-680	...686	...681
2 kg – 10 kg	3	17.000 g	9.XTHS-690	9.XTHR-690	...696	...691



Knob weights



SPECIAL STAINLESS STEEL HE210

highly polished

SETS with mg- weights (flat polygonal sheets)

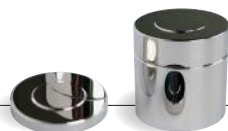
Nominal value	Qty.	Content	Clean room plastic cases	Mahogany wooden box	Service case	Clean room case removeable inserts	PTB Calibration certificate	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
1 mg–5 g	16	6,11 g	9.XNHP-730	9.XNHM-730	9.XNHS-730	9.XNHR-730	...736	...731
1 mg–50 g	20	111,11 g	9.XNHP-760	9.XNHM-760	9.XNHS-760	9.XNHR-760	...766	...761
1 mg–100 g	21	211,11 g	9.XNHP-770	9.XNHM-770	9.XNHS-770	9.XNHR-770	...776	...771
1 mg–200 g	23	611,11 g	9.XNHP-780	9.XNHM-780	9.XNHS-780	9.XNHR-780	...786	...781
1 mg–500 g	24	1.111,11 g	9.XNHP-790	9.XNHM-790	9.XNHS-790	9.XNHR-790	...796	...791
1 mg–1 kg	25	2.111,11 g	9.XNHP-810	9.XNHM-810	9.XNHS-810	9.XNHR-810	...816	...811
1 mg–2 kg	27	6.111,11 g	9.XNHP-820	9.XNHM-820	9.XNHS-820	9.XNHR-820	...826	...821
1 mg–5 kg	28	11.111,11 g	9.XNHP-830	9.XNHM-830	9.XNHS-830	9.XNHR-830	...836	...831
1 mg–10 kg	29	21.111,11 g	9.XNHP-840	9.XNHM-840	9.XNHS-840	9.XNHR-840	...846	...841
1 mg–1 kg (2x)	38	3.778,22 g	9.XNHP-850	9.XNHM-850	9.XNHS-850	9.XNHR-850	...856	...851

SETS with mg- weights (wire shape)

Nominal value	Qty.	Content	Clean room plastic box	Mahogany wooden box	Service case	Clean room case removeable inserts	PTB Calibration certificate	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
1 mg–5 g	16	6,11 g	9.XEHP-730	9.XEHM-730	9.XEHS-730	9.XEHR-730	...736	...731
1 mg–50 g	20	111,11 g	9.XEHP-760	9.XEHM-760	9.XEHS-760	9.XEHR-760	...766	...761
1 mg–100 g	21	211,11 g	9.XEHP-770	9.XEHM-770	9.XEHS-770	9.XEHR-770	...776	...771
1 mg–200 g	23	611,11 g	9.XEHP-780	9.XEHM-780	9.XEHS-780	9.XEHR-780	...786	...781
1 mg–500 g	24	1.111,11 g	9.XEHP-790	9.XEHM-790	9.XEHS-790	9.XEHR-790	...796	...791
1 mg–1 kg	25	2.111,11 g	9.XEHP-810	9.XEHM-810	9.XEHS-810	9.XEHR-810	...816	...811
1 mg–2 kg	27	6.111,11 g	9.XEHP-820	9.XEHM-820	9.XEHS-820	9.XEHR-820	...826	...821
1 mg–5 kg	28	11.111,11 g	9.XEHP-830	9.XEHM-830	9.XEHS-830	9.XEHR-830	...836	...831
1 mg–10 kg	29	21.111,11 g	9.XEHP-840	9.XEHM-840	9.XEHS-840	9.XEHR-840	...846	...841
1 mg–1 kg (2x)	38	3.778,22 g	9.XEHP-850	9.XEHM-850	9.XEHS-850	9.XEHR-850	...856	...851



Disc weights



SPECIAL STAINLESS STEEL HE210

highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases *	 Mahogany wooden box	 Clean room case removeable inserts	PTB Calibration certificate	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
1 g	0,010	9.SBHO-110 145,-	9.SBHD-110	9.SBHP-110	9.SBHM-110		...116	...111
2 g	0,012	9.SBHO-120 145,-	9.SBHD-120	9.SBHP-120	9.SBHM-120		...126	...121
5 g	0,016	9.SBHO-130 145,-	9.SBHD-130	9.SBHP-130	9.SBHM-130		...136	...131
10 g	0,020	9.SBHO-140 242,-	9.SBHD-140	9.SBHP-140	9.SBHM-140		...146	...141
20 g	0,025	9.SBHO-150 253,-	9.SBHD-150	9.SBHP-150	9.SBHM-150		...156	...151
50 g	0,03	9.SBHO-160 297,-	9.SBHD-160	9.SBHP-160	9.SBHM-160		...166	...161
100 g	0,05	9.SBHO-170 341,-	9.SBHD-170	9.SBHP-170	9.SBHM-170	9.SBHR-170	...176	...171
200 g	0,10	9.SBHO-180 396,-	9.SBHD-180	9.SBHP-180	9.SBHM-180	9.SBHR-180	...186	...181
500 g	0,25	9.SBHO-190 484,-	9.SBHD-190	9.SBHP-190	9.SBHM-190	9.SBHR-190	...196	...191
1 kg	0,5	9.SBHO-210 715,-	9.SBHD-210	9.SBHP-210	9.SBHM-210	9.SBHR-210	...216	...211
2 kg	1,0	9.SBHO-220 990,-	9.SBHD-220	9.SBHP-220	9.SBHM-220	9.SBHR-220	...226	...221
5 kg	2,5	9.SBHO-230 1430,-	9.SBHD-230	9.SBHP-230	9.SBHM-230	9.SBHR-230	...236	...231
10 kg	5	9.SBHO-240 2255,-	9.SBHD-240	9.SBHP-240	9.SBHM-240	9.SBHR-240	...246	...241
20 kg	10	9.SBHO-250 2860,-			9.SBHM-250	9.SBHR-250	...256	...251
50 kg	25	9.SBHO-260 5665,-			9.SBHM-260	9.SBHR-260	...266	...261

Nominal value	Tol.		 Service case certificate	PTB Calibration certificate	DAkks Calibration certificate
	+/- mg		Art.no.	9.0000-Art.no.	9.0000-Art.no.
5 kg	2,5		9.SBHS-230	...236	...231
10 kg	5		9.SBHS-240	...246	...241
20 kg	10		9.SBHS-250	...256	...251
50 kg	25		9.SBHS-260	...266	...261

* up from 100 g in a plastic case with foam insert



Disc weights

SPECIAL STAINLESS STEEL HE210

highly polished

SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Mahogany wooden box	 Service case	 Clean room case removeable inserts	PTB Calibration certificate	DAKKS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.	9.0000-Art.no.	9.0000-Art.no.
1g–5g	4	9g	9.XSHP-530	9.XSHM-530	9.XSHS-530	9.XSHR-530	...536	...531
1g–50g	8	110g	9.XSHP-560	9.XSHM-560	9.XSHS-560	9.XSHR-560	...566	...561
1g–100g	9	210g	9.XSHP-570	9.XSHM-570	9.XSHS-570	9.XSHR-570	...576	...571
1g–200g	11	610g	9.XSHP-580	9.XSHM-580	9.XSHS-580	9.XSHR-580	...586	...581
1g–500g	12	1.110g	9.XSHP-590	9.XSHM-590	9.XSHS-590	9.XSHR-590	...596	...591
1g–1kg	13	2.110g	9.XSHP-610	9.XSHM-610	9.XSHS-610	9.XSHR-610	...616	...611
1g–2kg	15	6.110g	9.XSHP-620	9.XSHM-620	9.XSHS-620	9.XSHR-620	...626	...621
1g–5kg	16	11.110g	9.XSHP-630	9.XSHM-630	9.XSHS-630	9.XSHR-630	...636	...631
1g–10kg	17	21.110g	9.XSHP-640	9.XSHM-640	9.XSHS-640	9.XSHR-640	...646	...641
10g–50g	3	80g	9.XSHP-650	9.XSHM-650	9.XSHS-650	9.XSHR-650	...656	...651
100g–500g	3	800g	9.XSHP-660	9.XSHM-660	9.XSHS-660	9.XSHR-660	...666	...661
100g–1kg	4	1.800g	9.XSHP-670	9.XSHM-670	9.XSHS-670	9.XSHR-670	...676	...671
1kg–5kg	4	10.000g	9.XSHP-680	9.XSHM-680	9.XSHS-680	9.XSHR-680	...686	...681
2kg–10kg	3	17.000g	9.XSHP-690	9.XSHM-690	9.XSHS-690	9.XSHR-690	...696	...691

3-Part service case

Available for all classes of weights

1mg – 5kg



Price on request

Trolley

Available for all classes of weights

1mg – 10kg

1mg – 20kg



Price on request

E2

Weight Standards of Class E2

Adjustment, testing and calibration weights for high-resolution scales of class I. Within the quality assurance of scales with steps > 100 000 according to DIN EN ISO 9001ff etc. For weighing or mass comparisons on balances of class I or on mass comparators. For calibration of weights of classes F1 and F2 according to OIML R111.

Solid masses in highest quality

ACCESSORIES



All weight sets include gloves, two brushes and two tweezers.
Up to 50 g without big tweezers, big brush and gloves.



CLEAN ROOM
PLASTIC CASES



MAHOGANY
WOODEN BOX



SERVICE
CASE



CLEAN ROOM CASE
removeable inserts



PLASTIC BOXES
WITH SCREWED TOP

Milligramm weights

STAINLESS STEEL HE210

Wire shape



highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	 Mahogany wooden box	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.
1 mg	0,006	8.DBHO-010	8.DBHD-010	8.DBHP-010	8.DBHM-010	8.0000-011
2 mg	0,006	8.DBHO-020	8.DBHD-020	8.DBHP-020	8.DBHM-020	8.0000-021
5 mg	0,006	8.DBHO-030	8.DBHD-030	8.DBHP-030	8.DBHM-030	8.0000-031
10 mg	0,008	8.DBHO-040	8.DBHD-040	8.DBHP-040	8.DBHM-040	8.0000-041
20 mg	0,010	8.DBHO-050	8.DBHD-050	8.DBHP-050	8.DBHM-050	8.0000-051
50 mg	0,012	8.DBHO-060	8.DBHD-060	8.DBHP-060	8.DBHM-060	8.0000-061
100 mg	0,016	8.DBHO-070	8.DBHD-070	8.DBHP-070	8.DBHM-070	8.0000-071
200 mg	0,020	8.DBHO-080	8.DBHD-080	8.DBHP-080	8.DBHM-080	8.0000-081
500 mg	0,025	8.DBHO-090	8.DBHD-090	8.DBHP-090	8.DBHM-090	8.0000-091

SET

Nominal value	Qty.	Content	 Clean room plastic cases	 Mahogany wooden box **	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.
1 mg – 500 mg	12	1,11 g	8.XEHP-710	8.XEHM-710	8.0000-711

** wooden box, inside plastic case with antistatic stainless steel coating, tweezer and brush

Milligramm weights

ALUMINIUM / GERMAN SILVER NICKEL

Flat polygonal sheets



SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	 Mahogany wooden box	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.
1 mg *	0,006	8.PAHO-010	8.PAHD-010	8.PAHP-010	8.PAHM-010	8.0000-011
2 mg *	0,006	8.PAHO-020	8.PAHD-020	8.PAHP-020	8.PAHM-020	8.0000-021
5 mg *	0,006	8.PAHO-030	8.PAHD-030	8.PAHP-030	8.PAHM-030	8.0000-031
10 mg	0,008	8.PNHO-040	8.PNHD-040	8.PNHP-040	8.PNHM-040	8.0000-041
20 mg	0,010	8.PNHO-050	8.PNHD-050	8.PNHP-050	8.PNHM-050	8.0000-051
50 mg	0,012	8.PNHO-060	8.PNHD-060	8.PNHP-060	8.PNHM-060	8.0000-061
100 mg	0,016	8.PNHO-070	8.PNHD-070	8.PNHP-070	8.PNHM-070	8.0000-071
200 mg	0,020	8.PNHO-080	8.PNHD-080	8.PNHP-080	8.PNHM-080	8.0000-081
500 mg	0,025	8.PNHO-090	8.PNHD-090	8.PNHP-090	8.PNHM-090	8.0000-091

* 1 mg - 5 mg made of aluminium

SET

Nominal value	Qty.	Content	 Clean room plastic cases	 Mahogany wooden box **	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.
1 mg – 500 mg	12	1,11 g	8.XFHP-710	8.XFHM-710	8.0000-711

Knob weights



STAINLESS STEEL HF12

highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	Plastic boxes with screwed top	Clean room plastic cases*	Mahogany wooden box	Clean room case with insert	DAKKS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	8.0000-Art.no.
1 g	0,030	8.MEHO-110	8.MEHD-110	8.MEHP-110	8.MEHM-110		...111
2 g	0,040	8.MEHO-120	8.MEHD-120	8.MEHP-120	8.MEHM-120		...121
5 g	0,050	8.MEHO-130	8.MEHD-130	8.MEHP-130	8.MEHM-130		...131
10 g	0,060	8.MEHO-140	8.MEHD-140	8.MEHP-140	8.MEHM-140		...141
20 g	0,080	8.MEHO-150	8.MEHD-150	8.MEHP-150	8.MEHM-150		...151
50 g	0,10	8.MEHO-160	8.MEHD-160	8.MEHP-160	8.MEHM-160		...161
100 g	0,16	8.MEHO-170	8.MEHD-170	8.MEHP-170	8.MEHM-170	8.MEHR-170	...171
200 g	0,3	8.MEHO-180	8.MEHD-180	8.MEHP-180	8.MEHM-180	8.MEHR-180	...181
500 g	0,8	8.MEHO-190	8.MEHD-190	8.MEHP-190	8.MEHM-190	8.MEHR-190	...191
1 kg	1,6	8.MEHO-210	8.MEHD-210	8.MEHP-210	8.MEHM-210	8.MEHR-210	...211
2 kg	3,0	8.MEHO-220	8.MEHD-220	8.MEHP-220	8.MEHM-220	8.MEHR-220	...221
5 kg	8,0	8.MEHO-230	8.MEHD-230	8.MEHP-230	8.MEHM-230	8.MEHR-230	...231
10 kg	16	8.MEHO-240	8.MEHD-240	8.MEHP-240	8.MEHM-240	8.MEHR-240	...241
20 kg	30	8.MEHO-250			8.MEHM-250	8.MEHR-250	...251
50 kg	80	8.MEHO-260			8.MEHM-260	8.MEHR-260	...261

Nominal value	Tol.				Service case	DAKKS Calibration certificate
	+/- mg				Art.-Nr.	8.0000-Art.-Nr.
5 kg	8,0				8.MEHS-230	...231
10 kg	16				8.MEHS-240	...241
20 kg	30				8.MEHS-250	...251
50 kg	80				8.MEHS-260	...261

SETS

Nominal value	Qty.	Content	Clean room plastic box	Mahogany wooden box	Service case	Clean room case with insert	DAKKS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.	8.0000-Art.no.
1 g – 50 g	8	110 g	8.XTHP-560	8.XTHM-560		8.XTHR-560	...561
1 g – 100 g	9	210 g	8.XTHP-570	8.XTHM-570	8.XTHS-570	8.XTHR-570	...571
1 g – 200 g	11	610 g	8.XTHP-580	8.XTHM-580	8.XTHS-580	8.XTHR-580	...581
1 g – 500 g	12	1.110 g	8.XTHP-590	8.XTHM-590	8.XTHS-590	8.XTHR-590	...591
1 g – 1 kg	13	2.110 g	8.XTHP-610	8.XTHM-610	8.XTHS-610	8.XTHR-610	...611
1 g – 2 kg	15	6.110 g	8.XTHP-620	8.XTHM-620	8.XTHS-620	8.XTHR-620	...621
1 g – 5 kg	16	11.110 g	8.XTHP-630	8.XTHM-630	8.XTHS-630	8.XTHR-630	...631
1 g – 10 kg	17	21.110 g	8.XTHP-640	8.XTHM-640	8.XTHS-640	8.XTHR-640	...641
1 kg – 5 kg	4	10.000 g	8.XTHP-680	8.XTHM-680	8.XTHS-680	8.XTHR-680	...681

* up from 100 g in a plastic case with foam insert

Knob weights


STAINLESS STEEL HF12

highly polished

SETS with mg- weights (flat polygonal sheets)

Nominal value	Qty.	Disc weights	Clean room plastic box	Mahogany wooden box	Service case	Clean room case with insert	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.	8.0000-Art.no.
1 mg – 5 g	16	6,11 g	8.XFHP-730	8.XFHM-730		8.XFHR-730	...731
1 mg – 50 g	20	111,11 g	8.XFHP-760	8.XFHM-760		8.XFHR-760	...761
1 mg – 100 g	21	211,11 g	8.XFHP-770	8.XFHM-770	8.XFHS-770	8.XFHR-770	...771
1 mg – 200 g	23	611,11 g	8.XFHP-780	8.XFHM-780	8.XFHS-780	8.XFHR-780	...781
1 mg – 500 g	24	1.111,11 g	8.XFHP-790	8.XFHM-790	8.XFHS-790	8.XFHR-790	...791
1 mg – 1 kg	25	2.111,11 g	8.XFHP-810	8.XFHM-810	8.XFHS-810	8.XFHR-810	...811
1 mg – 2 kg	27	6.111,11 g	8.XFHP-820	8.XFHM-820	8.XFHS-820	8.XFHR-820	...821
1 mg – 5 kg	28	11.111,11 g	8.XFHP-830	8.XFHM-830	8.XFHS-830	8.XFHR-830	...831
1 mg – 10 kg	29	21.111,11 g	8.XFHP-840	8.XFHM-840	8.XFHS-840	8.XFHR-840	...841
1 mg – 1 kg (2x)	38	3.778,22 g	8.XFHP-850	8.XFHM-850	8.XFHS-850	8.XFHR-850	...851

SETS Sets with mg- weights (wire shape)

Nominal value	Qty.	Content	Clean room plastic box	Mahogany wooden box	Service case	Clean room case with insert	DAkkS Calibration certificate
			Art.-Nr.	Art.-Nr.	Art.-Nr.	Art.-Nr.	8.0000-Art.-Nr.
1 mg – 5 g	16	6,11 g	8.XEHP-730	8.XEHM-730		8.XEHR-730	...731
1 mg – 50 g	20	111,11 g	8.XEHP-760	8.XEHM-760		8.XEHR-760	...761
1 mg – 100 g	21	211,11 g	8.XEHP-770	8.XEHM-770	8.XEHS-770	8.XEHR-770	...771
1 mg – 200 g	23	611,11 g	8.XEHP-780	8.XEHM-780	8.XEHS-780	8.XEHR-780	...781
1 mg – 500 g	24	1.111,11 g	8.XEHP-790	8.XEHM-790	8.XEHS-790	8.XEHR-790	...791
1 mg – 1 kg	25	2.111,11 g	8.XEHP-810	8.XEHM-810	8.XEHS-810	8.XEHR-810	...811
1 mg – 2 kg	27	6.111,11 g	8.XEHP-820	8.XEHM-820	8.XEHS-820	8.XEHR-820	...821
1 mg – 5 kg	28	11.111,11 g	8.XEHP-830	8.XEHM-830	8.XEHS-830	8.XEHR-830	...831
1 mg – 10 kg	29	21.111,11 g	8.XEHP-840	8.XEHM-840	8.XEHS-840	8.XEHR-840	...841
1 mg – 1 kg (2x)	38	3.778,22 g	8.XEHP-850	8.XEHM-850	8.XEHS-850	8.XEHR-850	...851

3-Part service case

Available for all classes of weights

1mg – 5kg



Price on request

Trolley

Available for all classes of weights

1mg – 10kg

1mg – 20kg



Price on request

Disc weights



STAINLESS STEEL HF12

highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases*	 Mahogany wooden box	 Clean room case with insert	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	8.0000- Art.no.
1 g	0,030	8.SEHO-110	8.SEHD-110	8.SEHP-110	8.SEHM-110		...111
2 g	0,040	8.SEHO-120	8.SEHD-120	8.SEHP-120	8.SEHM-120		...121
5 g	0,050	8.SEHO-130	8.SEHD-130	8.SEHP-130	8.SEHM-130		...131
10 g	0,060	8.SEHO-140	8.SEHD-140	8.SEHP-140	8.SEHM-140		...141
20 g	0,080	8.SEHO-150	8.SEHD-150	8.SEHP-150	8.SEHM-150		...151
50 g	0,10	8.SEHO-160	8.SEHD-160	8.SEHP-160	8.SEHM-160		...161
100 g	0,16	8.SEHO-170	8.SEHD-170	8.SEHP-170	8.SEHM-170	8.SEHR-170	...171
200 g	0,3	8.SEHO-180	8.SEHD-180	8.SEHP-180	8.SEHM-180	8.SEHR-180	...181
500 g	0,8	8.SEHO-190	8.SEHD-190	8.SEHP-190	8.SEHM-190	8.SEHR-190	...191
1 kg	1,6	8.SEHO-210	8.SEHD-210	8.SEHP-210	8.SEHM-210	8.SEHR-210	...211
2 kg	3,0	8.SEHO-220	8.SEHD-220	8.SEHP-220	8.SEHM-220	8.SEHR-220	...221
5 kg	8,0	8.SEHO-230	8.SEHD-230	8.SEHP-230	8.SEHM-230	8.SEHR-230	...231
10 kg	16	8.SEHO-240	8.SEHD-240	8.SEHP-240	8.SEHM-240	8.SEHR-240	...241
20 kg	30	8.SEHO-250			8.SEHM-250	8.SEHR-250	...251
50 kg	80	8.SEHO-260			8.SEHM-260	8.SEHR-260	...261

Nominal value	Tol.				 Service case	DAkkS Calibration certificate
	+/- mg				Art.no.	8.0000- Art.no.
5 kg	8,0				8.SEHS-230	...231
10 kg	16				8.SEHS-240	...241
20 kg	30				8.SEHS-250	...251
50 kg	80				8.SEHS-260	...261

SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Mahogany wooden box	 Service case	 Clean room case with insert	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.	8.0000- Art.no.
1 g – 5 g	4	9 g	8.XSHP-530	8.XSHM-530		8.XSHR-530	...531
1 g – 50 g	8	110 g	8.XSHP-560	8.XSHM-560		8.XSHR-560	...561
1 g – 100 g	9	210 g	8.XSHP-570	8.XSHM-570	8.XSHS-570	8.XSHR-570	...571
1 g – 200 g	11	610 g	8.XSHP-580	8.XSHM-580	8.XSHS-580	8.XSHR-580	...581
1 g – 500 g	12	1.110 g	8.XSHP-590	8.XSHM-590	8.XSHS-590	8.XSHR-590	...591
1 g – 1 kg	13	2.110 g	8.XSHP-610	8.XSHM-610	8.XSHS-610	8.XSHR-610	...611
1 g – 2 kg	15	6.110 g	8.XSHP-620	8.XSHM-620	8.XSHS-620	8.XSHR-620	...621
1 g – 5 kg	16	11.110 g	8.XSHP-630	8.XSHM-630	8.XSHS-630	8.XSHR-630	...631
1 g – 10 kg	17	21.110 g	8.XSHP-640	8.XSHM-640	8.XSHS-640	8.XSHR-640	...641
1 kg – 5 kg	4	10.000 g	8.XSHP-680	8.XSHM-680	8.XSHS-680	8.XSHR-680	...681

* up from 100 g in a plastic case with foam insert

Cylinder weights


STAINLESS STEEL HF12

highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases*	 Mahogany wooden box	 Clean room case with insert	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	8.0000-Art.no.
1 g	0,030	8.ZEHO-110	8.ZEHD-110	8.ZEHP-110	8.ZEHM-110		...111
2 g	0,040	8.ZEHO-120	8.ZEHD-120	8.ZEHP-120	8.ZEHM-120		...121
5 g	0,050	8.ZEHO-130	8.ZEHD-130	8.ZEHP-130	8.ZEHM-130		...131
10 g	0,060	8.ZEHO-140	8.ZEHD-140	8.ZEHP-140	8.ZEHM-140		...141
20 g	0,080	8.ZEHO-150	8.ZEHD-150	8.ZEHP-150	8.ZEHM-150		...151
50 g	0,10	8.ZEHO-160	8.ZEHD-160	8.ZEHP-160	8.ZEHM-160		...161
100 g	0,16	8.ZEHO-170	8.ZEHD-170	8.ZEHP-170	8.ZEHM-170	8.ZEHR-170	...171
200 g	0,3	8.ZEHO-180	8.ZEHD-180	8.ZEHP-180	8.ZEHM-180	8.ZEHR-180	...181
500 g	0,8	8.ZEHO-190	8.ZEHD-190	8.ZEHP-190	8.ZEHM-190	8.ZEHR-190	...191
1 kg	1,6	8.ZEHO-210	8.ZEHD-210	8.ZEHP-210	8.ZEHM-210	8.ZEHR-210	...211
2 kg	3,0	8.ZEHO-220	8.ZEHD-220	8.ZEHP-220	8.ZEHM-220	8.ZEHR-220	...221
5 kg	8,0	8.ZEHO-230	8.ZEHD-230	8.ZEHP-230	8.ZEHM-230	8.ZEHR-230	...231
10 kg	16	8.ZEHO-240	8.ZEHD-240	8.ZEHP-240	8.ZEHM-240	8.ZEHR-240	...241

Nominal value	Tol.					 Service case	DAkkS Calibration certificate
	+/- mg					Art.-Nr.	8.0000-Art.-Nr.
5 kg	8,0					8.ZEHS-230	...231
10 kg	16					8.ZEHS-240	...241



SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Mahogany wooden box	 Service case	 Clean room case with insert	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.	8.0000-Art.no.
1 g – 50 g	8	110 g	8.XZHP-560	8.XZHM-560		8.XZHR-560	...561
1 g – 100 g	9	210 g	8.XZHP-570	8.XZHM-570	8.XZHS-570	8.XZHR-570	...571
1 g – 200 g	11	610 g	8.XZHP-580	8.XZHM-580	8.XZHS-580	8.XZHR-580	...581
1 g – 500 g	12	1.110 g	8.XZHP-590	8.XZHM-590	8.XZHS-590	8.XZHR-590	...591
1 g – 1 kg	13	2.110 g	8.XZHP-610	8.XZHM-610	8.XZHS-610	8.XZHR-610	...611
1 g – 2 kg	15	6.110 g	8.XZHP-620	8.XZHM-620	8.XZHS-620	8.XZHR-620	...621
1 g – 5 kg	16	11.110 g	8.XZHP-630	8.XZHM-630	8.XZHS-630	8.XZHR-630	...631
1 g – 10 kg	17	21.110 g	8.XZHP-640	8.XZHM-640	8.XZHS-640	8.XZHR-640	...641
1 kg – 5 kg	4	10.000 g	8.XZHP-680	8.XZHM-680	8.XZHS-680	8.XZHR-680	...681

* up from 100 g in a plastic case with foam insert

F1

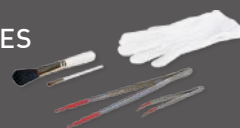
Analytical weights - class F1

Adjustment, testing and calibration weights for balances of class II and for quality assurance of scales with steps $\leq 100\,000$ according to ISO 9001ff. Weights for calibration of weights of lower classes (M3-F2) according to OIML R111.



Weights in the exclusive assortment case.

ACCESSORIES



All weight sets include gloves, two brushes and two tweezers.

Up to 50 g without big tweezers, big brush and gloves.



CLEAN ROOM
PLASTIC CASES



MAHOGANY
WOODEN BOX



SERVICE
CASE



CLEAN ROOM CASE
removeable inserts



PLASTIC BOXES
WITH SCREWED TOP

Milligramm weights


SPECIAL STAINLESS STEEL HE210

Wire shape

highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	 Mahogany wooden box	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.
1 mg	0,020	7.DBHO-010	7.DBHD-010	7.DBHP-010	7.DBHM-010	7.0000-011
2 mg	0,020	7.DBHO-020	7.DBHD-020	7.DBHP-020	7.DBHM-020	7.0000-021
5 mg	0,020	7.DBHO-030	7.DBHD-030	7.DBHP-030	7.DBHM-030	7.0000-031
10 mg	0,025	7.DBHO-040	7.DBHD-040	7.DBHP-040	7.DBHM-040	7.0000-041
20 mg	0,03	7.DBHO-050	7.DBHD-050	7.DBHP-050	7.DBHM-050	7.0000-051
50 mg	0,04	7.DBHO-060	7.DBHD-060	7.DBHP-060	7.DBHM-060	7.0000-061
100 mg	0,05	7.DBHO-070	7.DBHD-070	7.DBHP-070	7.DBHM-070	7.0000-071
200 mg	0,06	7.DBHO-080	7.DBHD-080	7.DBHP-080	7.DBHM-080	7.0000-081
500 mg	0,08	7.DBHO-090	7.DBHD-090	7.DBHP-090	7.DBHM-090	7.0000-091

SET

Nominal value	Qty.	Content	 Clean room plastic cases	 Mahogany wooden box	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.
1 mg – 500 mg	12	1,11 g	7.XEHP-710	7.XEHM-710	7.0000-711

Milligramm weights

ALUMINIUM / GERMAN SILVER NICKEL

Flat polygonal sheets



SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	 Mahogany wooden box	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.
1 mg	0,020	7.PAHO-010	7.PAHD-010	7.PAHP-010	7.PAHM-010	7.0000-011
2 mg	0,020	7.PAHO-020	7.PAHD-020	7.PAHP-020	7.PAHM-020	7.0000-021
5 mg	0,020	7.PAHO-030	7.PAHD-030	7.PAHP-030	7.PAHM-030	7.0000-031
10 mg	0,025	7.PNHO-040	7.PNHD-040	7.PNHP-040	7.PNHM-040	7.0000-041
20 mg	0,03	7.PNHO-050	7.PNHD-050	7.PNHP-050	7.PNHM-050	7.0000-051
50 mg	0,04	7.PNHO-060	7.PNHD-060	7.PNHP-060	7.PNHM-060	7.0000-061
100 mg	0,05	7.PNHO-070	7.PNHD-070	7.PNHP-070	7.PNHM-070	7.0000-071
200 mg	0,06	7.PNHO-080	7.PNHD-080	7.PNHP-080	7.PNHM-080	7.0000-081
500 mg	0,08	7.PNHO-090	7.PNHD-090	7.PNHP-090	7.PNHM-090	7.0000-091

* 1 mg - 5 mg made of aluminium

SET

Nominal value	Qty.	Content	 Clean room plastic cases	 Mahogany wooden box	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.
1 mg – 500 mg	12	1,11 g	7.XFHP-710	7.XFHM-710	7.0000-711

Knob weights

with adjustment chamber



STAINLESS STEEL HF12

highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases*	 Mahogany wooden box	 Clean room case with insert	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	7.0000-Art.no.
1 g	0,10	7.KEHO-110	7.KEHD-110	7.KEHP-110	7.KEHM-110		...111
2 g	0,12	7.KEHO-120	7.KEHD-120	7.KEHP-120	7.KEHM-120		...121
5 g	0,16	7.KEHO-130	7.KEHD-130	7.KEHP-130	7.KEHM-130		...131
10 g	0,20	7.KEHO-140	7.KEHD-140	7.KEHP-140	7.KEHM-140		...141
20 g	0,25	7.KEHO-150	7.KEHD-150	7.KEHP-150	7.KEHM-150		...151
50 g	0,30	7.KEHO-160	7.KEHD-160	7.KEHP-160	7.KEHM-160		...161
100 g	0,5	7.KEHO-170	7.KEHD-170	7.KEHP-170	7.KEHM-170	7.KEHR-170	...171
200 g	1,0	7.KEHO-180	7.KEHD-180	7.KEHP-180	7.KEHM-180	7.KEHR-180	...181
500 g	2,5	7.KEHO-190	7.KEHD-190	7.KEHP-190	7.KEHM-190	7.KEHR-190	...191
1 kg	5	7.KEHO-210	7.KEHD-210	7.KEHP-210	7.KEHM-210	7.KEHR-210	...211
2 kg	10	7.KEHO-220	7.KEHD-220	7.KEHP-220	7.KEHM-220	7.KEHR-220	...221
5 kg	25	7.KEHO-230	7.KEHD-230	7.KEHP-230	7.KEHM-230	7.KEHR-230	...231
10 kg	50	7.KEHO-240	7.KEHD-240	7.KEHP-240	7.KEHM-240	7.KEHR-240	...241
20 kg	100	7.KEHO-250			7.KEHM-250	7.KEHR-250	...251
50 kg	250	7.KEHO-260			7.KEHM-260	7.KEHR-260	...261

Nominal value	Tol.				 Service case	DAkkS Calibration certificate
	+/- mg				Art.no.	7.0000-Art.no.
5 kg	25				7.KEHS-230	...231
10 kg	50				7.KEHS-240	...241
20 kg	100				7.KEHS-250	...251
50 kg	250				7.KEHS-260	...261

SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Mahogany wooden box	 Service case	 Clean room case with insert	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.	7.0000-Art.no.
1 g – 50 g	8	110 g	7.XKHP-560	7.XKHM-560		7.XKHR-560	...561
1 g – 100 g	9	210 g	7.XKHP-570	7.XKHM-570	7.XKHS-570	7.XKHR-570	...571
1 g – 200 g	11	610 g	7.XKHP-580	7.XKHM-580	7.XKHS-580	7.XKHR-580	...581
1 g – 500 g	12	1.110 g	7.XKHP-590	7.XKHM-590	7.XKHS-590	7.XKHR-590	...591
1 g – 1 kg	13	2.110 g	7.XKHP-610	7.XKHM-610	7.XKHS-610	7.XKHR-610	...611
1 g – 2 kg	15	6.110 g	7.XKHP-620	7.XKHM-620	7.XKHS-620	7.XKHR-620	...621
1 g – 5 kg	16	11.110 g	7.XKHP-630	7.XKHM-630	7.XKHS-630	7.XKHR-630	...631
1 g – 10 kg	17	21.110 g	7.XKHP-640	7.XKHM-640	7.XKHS-640	7.XKHR-640	...641
1 kg – 5 kg	4	10.000 g	7.XKHP-680	7.XKHM-680	7.XKHS-680	7.XKHR-680	...681

* up from 100 g in a plastic case with foam insert

Knob weights

with adjustment chamber

STAINLESS STEEL HF12

highly polished



SETS with mg- weights (flat polygonal sheets)

Nominal value	Qty.	Content	 Clean room plastic cases	 Mahogany wooden box	 Service case	 Clean room case with insert	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.	7.0000-Art.no.
1 mg – 5 g	16	6,11 g	7.XOHP-730	7.XOHM-730		7.XOHR-730	...731
1 mg – 50 g	20	111,11 g	7.XOHP-760	7.XOHM-760		7.XOHR-760	...761
1 mg – 100 g	21	211,11 g	7.XOHP-770	7.XOHM-770	7.XOHS-770	7.XOHR-770	...771
1 mg – 200 g	23	611,11 g	7.XOHP-780	7.XOHM-780	7.XOHS-780	7.XOHR-780	...781
1 mg – 500 g	24	1.111,11 g	7.XOHP-790	7.XOHM-790	7.XOHS-790	7.XOHR-790	...791
1 mg – 1 kg	25	2.111,11 g	7.XOHP-810	7.XOHM-810	7.XOHS-810	7.XOHR-810	...811
1 mg – 2 kg	27	6.111,11 g	7.XOHP-820	7.XOHM-820	7.XOHS-820	7.XOHR-820	...821
1 mg – 5 kg	28	11.111,11 g	7.XOHP-830	7.XOHM-830	7.XOHS-830	7.XOHR-830	...831
1 mg – 10 kg	29	21.111,11 g	7.XOHP-840	7.XOHM-840	7.XOHS-840	7.XOHR-840	...841

SETS with mg- weights (wire shape)

Nominal value	Qty.	Content	 Clean room plastic box	 Mahogany wooden box	 Service case	 Clean room case with insert	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.	7.0000-Art.no.
1 mg – 5 g	16	6,11 g	7.XQHP-730	7.XQHM-730		7.XQHR-730	...731
1 mg – 50 g	20	111,11 g	7.XQHP-760	7.XQHM-760		7.XQHR-760	...761
1 mg – 100 g	21	211,11 g	7.XQHP-770	7.XQHM-770	7.XQHS-770	7.XQHR-770	...771
1 mg – 200 g	23	611,11 g	7.XQHP-780	7.XQHM-780	7.XQHS-780	7.XQHR-780	...781
1 mg – 500 g	24	1.111,11 g	7.XQHP-790	7.XQHM-790	7.XQHS-790	7.XQHR-790	...791
1 mg – 1 kg	25	2.111,11 g	7.XQHP-810	7.XQHM-810	7.XQHS-810	7.XQHR-810	...811
1 mg – 2 kg	27	6.111,11 g	7.XQHP-820	7.XQHM-820	7.XQHS-820	7.XQHR-820	...821
1 mg – 5 kg	28	11.111,11 g	7.XQHP-830	7.XQHM-830	7.XQHS-830	7.XQHR-830	...831
1 mg – 10 kg	29	21.111,11 g	7.XQHP-840	7.XQHM-840	7.XQHS-840	7.XQHR-840	...841



Knob weights

solid masses without adjustment chamber



STAINLESS STEEL HF12

highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases*	 Mahogany wooden box	 Clean room case with insert	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	7.0000-Art.no.
1 g	0,10	7.MEHO-110	7.MEHD-110	7.MEHP-110	7.MEHM-110		...111
2 g	0,12	7.MEHO-120	7.MEHD-120	7.MEHP-120	7.MEHM-120		...121
5 g	0,16	7.MEHO-130	7.MEHD-130	7.MEHP-130	7.MEHM-130		...131
10 g	0,20	7.MEHO-140	7.MEHD-140	7.MEHP-140	7.MEHM-140		...141
20 g	0,25	7.MEHO-150	7.MEHD-150	7.MEHP-150	7.MEHM-150		...151
50 g	0,30	7.MEHO-160	7.MEHD-160	7.MEHP-160	7.MEHM-160		...161
100 g	0,5	7.MEHO-170	7.MEHD-170	7.MEHP-170	7.MEHM-170	7.MEHR-170	...171
200 g	1,0	7.MEHO-180	7.MEHD-180	7.MEHP-180	7.MEHM-180	7.MEHR-180	...181
500 g	2,5	7.MEHO-190	7.MEHD-190	7.MEHP-190	7.MEHM-190	7.MEHR-190	...191
1 kg	5	7.MEHO-210	7.MEHD-210	7.MEHP-210	7.MEHM-210	7.MEHR-210	...211
2 kg	10	7.MEHO-220	7.MEHD-220	7.MEHP-220	7.MEHM-220	7.MEHR-220	...221
5 kg	25	7.MEHO-230	7.MEHD-230	7.MEHP-230	7.MEHM-230	7.MEHR-230	...231
10 kg	50	7.MEHO-240	7.MEHD-240	7.MEHP-240	7.MEHM-240	7.MEHR-240	...241
20 kg	100	7.MEHO-250			7.MEHM-250	7.MEHR-250	...251
50 kg	250	7.MEHO-260			7.MEHM-260	7.MEHR-260	...261

Nominal value	Tol.				 Service case	DAkkS Calibration certificate
	+/- mg				Art.no.	7.0000-Art.no.
5 kg	25				7.MEHS-230	...231
10 kg	50				7.MEHS-240	...241
20 kg	100				7.MEHS-250	...251
50 kg	250				7.MEHS-260	...261

SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Mahogany wooden box	 Service case	 Clean room case with insert	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.	7.0000-Art.no.
1 g – 50 g	8	110 g	7.XTHP-560	7.XTHM-560		7.XTHR-560	...561
1 g – 100 g	9	210 g	7.XTHP-570	7.XTHM-570	7.XTHS-570	7.XTHR-570	...571
1 g – 200 g	11	610 g	7.XTHP-580	7.XTHM-580	7.XTHS-580	7.XTHR-580	...581
1 g – 500 g	12	1.110 g	7.XTHP-590	7.XTHM-590	7.XTHS-590	7.XTHR-590	...591
1 g – 1 kg	13	2.110 g	7.XTHP-610	7.XTHM-610	7.XTHS-610	7.XTHR-610	...611
1 g – 2 kg	15	6.110 g	7.XTHP-620	7.XTHM-620	7.XTHS-620	7.XTHR-620	...621
1 g – 5 kg	16	11.110 g	7.XTHP-630	7.XTHM-630	7.XTHS-630	7.XTHR-630	...631
1 g – 10 kg	17	21.110 g	7.XTHP-640	7.XTHM-640	7.XTHS-640	7.XTHR-640	...641
1 kg – 5 kg	4	10.000 g	7.XTHP-680	7.XTHM-680	7.XTHS-680	7.XTHR-680	...681

* up from 100 g in a plastic case with foam insert

Knob weights

solid masses without adjustment chamber



STAINLESS STEEL HF12

highly polished

SETS with mg- weights (flat polygonal sheets)

Nominal value	Qty.	Content	Clean room plastic box	Mahogany wooden box	Service case	Clean room case with insert	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.	7.0000-Art.no.
1 mg – 5 g	16	6,11 g	7.XFHP-730	7.XFHM-730		7.XFHR-730	...731
1 mg – 50 g	20	111,11 g	7.XFHP-760	7.XFHM-760		7.XFHR-760	...761
1 mg – 100 g	21	211,11 g	7.XFHP-770	7.XFHM-770	7.XFHS-770	7.XFHR-770	...771
1 mg – 200 g	23	611,11 g	7.XFHP-780	7.XFHM-780	7.XFHS-780	7.XFHR-780	...781
1 mg – 500 g	24	1.111,11 g	7.XFHP-790	7.XFHM-790	7.XFHS-790	7.XFHR-790	...791
1 mg – 1 kg	25	2.111,11 g	7.XFHP-810	7.XFHM-810	7.XFHS-810	7.XFHR-810	...811
1 mg – 2 kg	27	6.111,11 g	7.XFHP-820	7.XFHM-820	7.XFHS-820	7.XFHR-820	...821
1 mg – 5 kg	28	11.111,11 g	7.XFHP-830	7.XFHM-830	7.XFHS-830	7.XFHR-830	...831
1 mg – 10 kg	29	21.111,11 g	7.XFHP-840	7.XFHM-840	7.XFHS-840	7.XFHR-840	...841

SETS with mg- weights (wire shape)

Nominal value	Qty.	Content	Clean room plastic box	Mahogany wooden box	Service case	Clean room case with insert	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.	7.0000-Art.no.
1 mg – 5 g	16	6,11 g	7.XEHP-730	7.XEHM-730		7.XEHR-730	...731
1 mg – 50 g	20	111,11 g	7.XEHP-760	7.XEHM-760		7.XEHR-760	...761
1 mg – 100 g	21	211,11 g	7.XEHP-770	7.XEHM-770	7.XEHS-770	7.XEHR-770	...771
1 mg – 200 g	23	611,11 g	7.XEHP-780	7.XEHM-780	7.XEHS-780	7.XEHR-780	...781
1 mg – 500 g	24	1.111,11 g	7.XEHP-790	7.XEHM-790	7.XEHS-790	7.XEHR-790	...791
1 mg – 1 kg	25	2.111,11 g	7.XEHP-810	7.XEHM-810	7.XEHS-810	7.XEHR-810	...811
1 mg – 2 kg	27	6.111,11 g	7.XEHP-820	7.XEHM-820	7.XEHS-820	7.XEHR-820	...821
1 mg – 5 kg	28	11.111,11 g	7.XEHP-830	7.XEHM-830	7.XEHS-830	7.XEHR-830	...831
1 mg – 10 kg	29	21.111,11 g	7.XEHP-840	7.XEHM-840	7.XEHS-840	7.XEHR-840	...841

3-Part service case

Available for all classes of weights

Price on request

1mg – 5kg



Trolley

Available for all classes of weights

Price on request

1mg – 10kg

1mg – 20kg



Cylinder weights



STAINLESS STEEL HF12

highly polished

solid masses, stackable, without adjustment chamber

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases*	 Mahogany wooden box	 Clean room case with insert	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	7.0000-Art.no.
1 g	0,10	7.ZEHO-110	7.ZEHD-110	7.ZEHP-110	7.ZEHM-110		...111
2 g	0,12	7.ZEHO-120	7.ZEHD-120	7.ZEHP-120	7.ZEHM-120		...121
5 g	0,16	7.ZEHO-130	7.ZEHD-130	7.ZEHP-130	7.ZEHM-130		...131
10 g	0,20	7.ZEHO-140	7.ZEHD-140	7.ZEHP-140	7.ZEHM-140		...141
20 g	0,25	7.ZEHO-150	7.ZEHD-150	7.ZEHP-150	7.ZEHM-150		...151
50 g	0,30	7.ZEHO-160	7.ZEHD-160	7.ZEHP-160	7.ZEHM-160		...161
100 g	0,5	7.ZEHO-170	7.ZEHD-170	7.ZEHP-170	7.ZEHM-170	7.ZEHR-170	...171
200 g	1,0	7.ZEHO-180	7.ZEHD-180	7.ZEHP-180	7.ZEHM-180	7.ZEHR-180	...181
500 g	2,5	7.ZEHO-190	7.ZEHD-190	7.ZEHP-190	7.ZEHM-190	7.ZEHR-190	...191
1 kg	5	7.ZEHO-210	7.ZEHD-210	7.ZEHP-210	7.ZEHM-210	7.ZEHR-210	...211
2 kg	10	7.ZEHO-220	7.ZEHD-220	7.ZEHP-220	7.ZEHM-220	7.ZEHR-220	...221
5 kg	25	7.ZEHO-230	7.ZEHD-230	7.ZEHP-230	7.ZEHM-230	7.ZEHR-230	...231
10 kg	50	7.ZEHO-240	7.ZEHD-240	7.ZEHP-240	7.ZEHM-240	7.ZEHR-240	...241

Nominal value	Tol.					 Service case	DAkkS Calibration certificate
	+/- mg					Art.no.	7.0000-Art.no.
5 kg	8,0					7.ZEHS-230	...231
10 kg	16					7.ZEHS-240	...241

Block weights



STAINLESS STEEL HF12

highly polished

round

SINGLE WEIGHT

Nominal value	Tol.	without box	Clean room plastic cases*	Mahogany wooden box	Service case	Clean room case with insert	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	7.0000-Art.no.
5 kg	25	7.REPO-230	7.REPP-230	7.REPM-230	7.REPS-230	7.REPR-230	...231
10 kg	50	7.REPO-240	7.REPP-240	7.REPM-240	7.REPS-240	7.REPR-240	...241
20 kg	100	7.REPO-250		7.REPM-250	7.REPS-250	7.REPR-250	...251
25 kg	125	7.REPO-450		7.REPM-450	7.REPS-450		...451
50 kg	250	7.REPO-260		7.REPM-260	7.REPS-260	7.REPR-260	...261

rectangular



SINGLE WEIGHT

Nominal value	Tol.	without box	Clean room plastic cases*	Mahogany wooden box	Service case	Clean room case with insert	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	7.0000-Art.no.
5 kg	25	7.BEHO-230	7.BEHP-230	7.BEHM-230	7.BEHS-230	7.BEHR-230	...231
10 kg	50	7.BEHO-240	7.BEHP-240	7.BEHM-240	7.BEHS-240	7.BEHR-240	...241
20 kg	100	7.BEHO-250		7.BEHM-250	7.BEHS-250	7.BEHR-250	...251
25 kg	125	7.BEHO-450		7.BEHM-450	7.BEHS-450		...451
50 kg	250	7.BEHO-260		7.BEHM-260	7.BEHS-260	7.BEHR-260	...261



Cylinder weights



STAINLESS STEEL HF12

highly polished

SINGLE WEIGHT with 4 stood bolts

Nominal value	Tol.	 Wooden box	 Service case	PTB Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.
100 kg	500	7.ZEHM-270	7.ZEHS-270	7.0000-276
200 kg	1000	7.ZEHM-280	7.ZEHS-280	7.0000-286
250 kg	1250	7.ZEHM-460	7.ZEHS-460	7.0000-466
500 kg	2500	7.ZEHM-290	7.ZEHS-290	7.0000-296
1000 kg	5000	7.ZEHM-310	7.ZEHS-310	7.0000-316
2000 kg	10000	7.ZEHM-320	7.ZEHS-320	7.0000-326



SINGLE WEIGHT with eyebolt

Nominal value	Tol.	 Wooden box	 Service case	PTB Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.
100 kg	500	7.UEHM-270	7.UEHS-270	7.0000-276
200 kg	1000	7.UEHM-280	7.UEHS-280	7.0000-286
250 kg	1250	7.UEHM-460	7.UEHS-460	7.0000-466
500 kg	2500	7.UEHM-290	7.UEHS-290	7.0000-296
1000 kg	5000	7.UEHM-310	7.UEHS-310	7.0000-316
2000 kg	10000	7.UEHM-320	7.UEHS-320	7.0000-326



F2

Precision weights - class F2

Adjustment, testing and calibration weights for balances of class II and for quality assurance of scales with steps $\leq 50\,000$ according to ISO 9001ff. Weights for calibration of weights of lower classes (M3-M1) according to OIML R111. Usage for meaningful transactions (e.g. precious metals and gemstones) on scales of class II. Load application bodies for the representation of the most accurate determination of tension, pressure or torsion.

Quality is our demand

ACCESSORIES



All weight sets include gloves, two brushes and two tweezers.
Up to 50 g without big tweezers, big brush and gloves.



CLEAN ROOM
PLASTIC CASES



BEECH WOODEN
BOX



SERVICE
CASE



CLEAN ROOM CASE
with inserts



LEATHER
CASES



PLASTIC BOXES
WITH SCREWED TOP

Milligramm weights

ALUMINIUM / GERMAN SILVER NICKEL

Flat polygonal sheets



SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.
1 mg *	0,06	6.PAHO-010	6.PAHD-010	6.PAHP-010	6.0000-011
2 mg *	0,06	6.PAHO-020	6.PAHD-020	6.PAHP-020	6.0000-021
5 mg *	0,06	6.PAHO-030	6.PAHD-030	6.PAHP-030	6.0000-031
10 mg	0,08	6.PNHO-040	6.PNHD-040	6.PNHP-040	6.0000-041
20 mg	0,10	6.PNHO-050	6.PNHD-050	6.PNHP-050	6.0000-051
50 mg	0,12	6.PNHO-060	6.PNHD-060	6.PNHP-060	6.0000-061
100 mg	0,16	6.PNHO-070	6.PNHD-070	6.PNHP-070	6.0000-071
200 mg	0,2	6.PNHO-080	6.PNHD-080	6.PNHP-080	6.0000-081
500 mg	0,25	6.PNHO-090	6.PNHD-090	6.PNHP-090	6.0000-091

* 1 mg - 5 mg made of aluminium

SET

Nominal value	Qty.	Content	 Clean room plastic cases	 Beech wood box	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.
1 mg – 500 mg	12	1,11 g	6.XFGP-710	6.XFGB-710	6.0000-711

Milligramm weights

SPECIAL STAINLESS STEEL HE210

Wire shape



highly polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.
1 mg	0,06	6.DBHO-010	6.DBHD-010	6.DBHP-010	6.0000-011
2 mg	0,06	6.DBHO-020	6.DBHD-020	6.DBHP-020	6.0000-021
5 mg	0,06	6.DBHO-030	6.DBHD-030	6.DBHP-030	6.0000-031
10 mg	0,08	6.DBHO-040	6.DBHD-040	6.DBHP-040	6.0000-041
20 mg	0,10	6.DBHO-050	6.DBHD-050	6.DBHP-050	6.0000-051
50 mg	0,12	6.DBHO-060	6.DBHD-060	6.DBHP-060	6.0000-061
100 mg	0,16	6.DBHO-070	6.DBHD-070	6.DBHP-070	6.0000-071
200 mg	0,2	6.DBHO-080	6.DBHD-080	6.DBHP-080	6.0000-081
500 mg	0,25	6.DBHO-090	6.DBHD-090	6.DBHP-090	6.0000-091

SET

Nominal value	Qty.	Content	 Clean room plastic cases	 Beech wood box	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.
1 mg – 500 mg	12	1,11 g	6.XEGP-710	6.XEGB-710	6.0000-711

Knob weights

with adjustment chamber



STAINLESS STEEL HF12

polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	 Beech wood box	 Service case	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	6.0000-Art.no.
1 g	0,3	6.KEGO-110	6.KEGD-110	6.KEGP-110	6.KEGB-110		...111
2 g	0,4	6.KEGO-120	6.KEGD-120	6.KEGP-120	6.KEGB-120		...121
5 g	0,5	6.KEGO-130	6.KEGD-130	6.KEGP-130	6.KEGB-130		...131
10 g	0,6	6.KEGO-140	6.KEGD-140	6.KEGP-140	6.KEGB-140		...141
20 g	0,8	6.KEGO-150	6.KEGD-150	6.KEGP-150	6.KEGB-150		...151
50 g	1,0	6.KEGO-160	6.KEGD-160	6.KEGP-160	6.KEGB-160		...161
100 g	1,6	6.KEGO-170	6.KEGD-170	6.KEGP-170	6.KEGB-170		...171
200 g	3,0	6.KEGO-180	6.KEGD-180	6.KEGP-180	6.KEGB-180		...181
500 g	8,0	6.KEGO-190	6.KEGD-190	6.KEGP-190	6.KEGB-190		...191
1 kg	16	6.KEGO-210	6.KEGD-210	6.KEGP-210	6.KEGB-210		...211
2 kg	30	6.KEGO-220	6.KEGD-220	6.KEGP-220	6.KEGB-220		...221
5 kg	80	6.KEGO-230	6.KEGD-230	6.KEGP-230	6.KEGB-230	6.KEGS-230	...231
10 kg	160	6.KEGO-240	6.KEGD-240	6.KEGP-240	6.KEGB-240	6.KEGS-240	...241
20 kg	300	6.KEGO-250			6.KEGB-250	6.KEGS-250	...251
50 kg	800	6.KEGO-260			6.KEGB-260	6.KEGS-260	...261

SETS

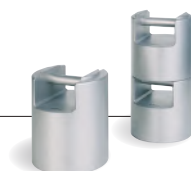
Nominal value	Qty.	Content	 Clean room plastic box	 Beech wood box	 Service case	DAkks Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 g – 50 g	8	110 g	6.XKGP-560	6.XKGB-560	6.XKGS-560	6.0000-561
1 g – 100 g	9	210 g	6.XKGP-570	6.XKGB-570	6.XKGS-570	6.0000-571
1 g – 200 g	11	610 g	6.XKGP-580	6.XKGB-580	6.XKGS-580	6.0000-581
1 g – 500 g	12	1.110 g	6.XKGP-590	6.XKGB-590	6.XKGS-590	6.0000-591
1 g – 1 kg	13	2.110 g	6.XKGP-610	6.XKGB-610	6.XKGS-610	6.0000-611
1 g – 2 kg	15	6.110 g	6.XKGP-620	6.XKGB-620	6.XKGS-620	6.0000-621
1 g – 5 kg	16	11.110 g	6.XKGP-630	6.XKGB-630	6.XKGS-630	6.0000-631
1 g – 10 kg	17	21.110 g	6.XKGP-640	6.XKGB-640	6.XKGS-640	6.0000-641
1 kg – 5 kg	4	10.000 g	6.XKGP-680	6.XKGB-680	6.XKGS-680	6.0000-681

SETS with mg- weights (flat polygonal sheets)

Nominal value	Qty.	Content	 Clean room plastic box	 Beech wood box	 Service case	DAkks Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 mg – 5 g	16	6,11 g	6.XFGP-730	6.XFGB-730	6.XFGS-730	6.0000-731
1 mg – 50 g	20	111,11 g	6.XFGP-760	6.XFGB-760	6.XFGS-760	6.0000-761
1 mg – 100 g	21	211,11 g	6.XFGP-770	6.XFGB-770	6.XFGS-770	6.0000-771
1 mg – 200 g	23	611,11 g	6.XFGP-780	6.XFGB-780	6.XFGS-780	6.0000-781
1 mg – 500 g	24	1.111,11 g	6.XFGP-790	6.XFGB-790	6.XFGS-790	6.0000-791
1 mg – 1 kg	25	2.111,11 g	6.XFGP-810	6.XFGB-810	6.XFGS-810	6.0000-811
1 mg – 2 kg	27	6.111,11 g	6.XFGP-820	6.XFGB-820	6.XFGS-820	6.0000-821
1 mg – 5 kg	28	11.111,11 g	6.XFGP-830	6.XFGB-830	6.XFGS-830	6.0000-831
1 mg – 10 kg	29	21.111,11 g	6.XFGP-840	6.XFGB-840	6.XFGS-840	6.0000-841

Block weights

round



STAINLESS STEEL HF12

polished

SINGLE WEIGHT

Nominal value	Tol.	without box	 Clean room plastic cases	 Beech wood box	 Service case	 Clean room case with insert	DAkks Calibration certificate
+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	6.0000-Art.no.
5 kg 80	6.REGO-230	6.REGP-230	6.REGB-230	6.REGS-230	6.REGR-230	...	...231
10 kg 160	6.REGO-240	6.REGP-240	6.REGB-240	6.REGS-240	6.REGR-240	...	...241
20 kg 300	6.REGO-250		6.REGB-250	6.REGS-250	6.REGR-250	...	...251
25 kg 400	6.REGO-450		6.REGB-450	6.REGS-450		...	...451
50 kg 800	6.REGO-260		6.REGB-260	6.REGS-260	6.REGR-260	...	...261

rectangular

SINGLE WEIGHT



Nominal value	Tol.	without box	 Clean room plastic cases	 Leather cases	 Service case	 Clean room case with insert	DAkks Calibration certificate
+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	6.0000-Art.no.
5 kg 80	6.BEPO-230	6.BEPP-230	6.BEPL-230	6.BEPS-230	6.BEPR-230	...	...231
10 kg 160	6.BEPO-240	6.BEPP-240	6.BEPL-240	6.BEPS-240	6.BEPR-240	...	...241
20 kg 300	6.BEPO-250		6.BEPL-250	6.BEPS-250	6.BEPR-250	...	...251
25 kg 400	6.BEPO-450			6.BEPS-450		...	...451
50 kg 800	6.BEPO-260			6.BEPS-260	6.BEPR-260	...	...261

Basket weights

for round block weights



STAINLESS STEEL HF12

polished

Nominal value	max. weight	Tol.	without box	DAkks Calibration certificate
		+/- mg	Art.no.	Art.no.
20 kg	120 kg	300	6.NEGO-250	6.0000-251
40 kg	250 kg	600	6.NEGO-410	6.0000-411
50 kg	500 kg	800	6.NEGO-260	6.0000-261
60 kg	500 kg	960	6.NEGO-420	6.0000-421

for rectangular block weights



Nominal value	max. weight	Tol.	without box	DAkks Calibration certificate
		+/- mg	Art.no.	Art.no.
20 kg	120 kg	300	6.LEGO-250	6.0000-251
40 kg	250 kg	600	6.LEGO-410	6.0000-411
50 kg	500 kg	800	6.LEGO-260	6.0000-261
60 kg	500 kg	960	6.LEGO-420	6.0000-421

Custom-made products according to customer specification.

Cylinder weights


STAINLESS STEEL HF12 polished

SINGLE WEIGHT with 4 stood bolts

Nominal value	Tol.	 Wooden box	 Service case	PTB Calibration certificate	DAkkS Calibration certificate
	+/- g	Art.no.	Art.no.	Art.no.	Art.no.
100 kg	1,6	6.ZEGB-270	6.ZEGS-270		6.0000-271
200 kg	3,0	6.ZEGB-280	6.ZEGS-280		6.0000-281
250 kg	4,0	6.ZEGB-460	6.ZEGS-460		6.0000-461
500 kg	8,0	6.ZEGB-290	6.ZEGS-290		6.0000-291
1000 kg	16	6.ZEGB-310	6.ZEGS-310		6.0000-316
2000 kg	30	6.ZEGB-320	6.ZEGS-320	6.0000-326	



SINGLE WEIGHT with eyebolt

Nominal value	Tol.	 Wooden box	 Service case	PTB Calibration certificate	DAkkS Calibration certificate
	+/- g	Art.no.	Art.no.	Art.no.	Art.no.
100 kg	1,6	6.UEGB-270	6.UEGS-270		6.0000-271
200 kg	3,0	6.UEGB-280	6.UEGS-280		6.0000-281
250 kg	4,0	6.UEGB-460	6.UEGS-460		6.0000-461
500 kg	8,0	6.UEGB-290	6.UEGS-290		6.0000-291
1000 kg	16	6.UEGB-310	6.UEGS-310		6.0000-316
2000 kg	30	6.UEGB-320	6.UEGS-320	6.0000-326	

3-Part service case

Available for all classes of weights

1mg – 5kg



Trolley

Available for all classes of weights

1mg – 10kg

1mg – 20kg



Price on request

Carrier weights


STAINLESS STEEL HF12 polished

SINGLE WEIGHT

Nominal value	Tol.	without box	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.
1 g	0,3	6.TEGO-110	6.0000-111
2 g	0,4	6.TEGO-120	6.0000-121
5 g	0,5	6.TEGO-130	6.0000-131
10 g	0,6	6.TEGO-140	6.0000-141
20 g	0,8	6.TEGO-150	6.0000-151
50 g	1,0	6.TEGO-160	6.0000-161
100 g	1,6	6.TEGO-170	6.0000-171
200 g	3,0	6.TEGO-180	6.0000-181
500 g	8,0	6.TEGO-190	6.0000-191
1 kg	16	6.TEGO-210	6.0000-211
2 kg	30	6.TEGO-220	6.0000-221
5 kg	80	6.TEGO-230	6.0000-231
10 kg	160	6.TEGO-240	6.0000-241
20 kg	300	6.TEGO-250	6.0000-251

Slotted weights


STAINLESS STEEL HF12 polished

SINGLE WEIGHT

Nominal value	Tol.	without box	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.
1 g	0,3	6.IEGO-110	6.0000-111
2 g	0,4	6.IEGO-120	6.0000-121
5 g	0,5	6.IEGO-130	6.0000-131
10 g	0,6	6.IEGO-140	6.0000-141
20 g	0,8	6.IEGO-150	6.0000-151
50 g	1,0	6.IEGO-160	6.0000-161
100 g	1,6	6.IEGO-170	6.0000-171
200 g	3,0	6.IEGO-180	6.0000-181
500 g	8,0	6.IEGO-190	6.0000-191
1 kg	16	6.IEGO-210	6.0000-211
2 kg	30	6.IEGO-220	6.0000-221
5 kg	80	6.IEGO-230	6.0000-231
10 kg	160	6.IEGO-240	6.0000-241
20 kg	300	6.IEGO-250	6.0000-251

M1

Precision weights - class M1

Adjustment, testing and calibration weights for commercial balances (class III) and for quality assurance of scales with steps $\leq 10\,000$ according to ISO 9001ff.

Weights for calibration of weights of classes M2 and M3

Weights in the exclusive assortment case.

ACCESSORIES



All weight sets include gloves, two brushes and two tweezers.

Up to 50 g without big tweezers, big brush and gloves.



CLEAN ROOM
PLASTIC CASES



BEECH WOODEN
BOX



SERVICE
CASE



PLASTIC BOXES WITH
SCREWED TOP

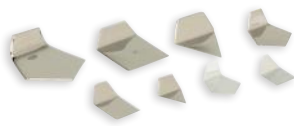


LEATHER CASES

Milligramm weights

ALUMINIUM / GERMAN SILVER NICKEL

Flat polygonal sheets



SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.
1 mg	0,20	5.PAHO-010	5.PAHD-010	5.PAHP-010	5.0000-011
2 mg	0,20	5.PAHO-020	5.PAHD-020	5.PAHP-020	5.0000-021
5 mg	0,20	5.PAHO-030	5.PAHD-030	5.PAHP-030	5.0000-031
10 mg	0,25	5.PNHO-040	5.PNHD-040	5.PNHP-040	5.0000-041
20 mg	0,30	5.PNHO-050	5.PNHD-050	5.PNHP-050	5.0000-051
50 mg	0,40	5.PNHO-060	5.PNHD-060	5.PNHP-060	5.0000-061
100 mg	0,50	5.PNHO-070	5.PNHD-070	5.PNHP-070	5.0000-071
200 mg	0,60	5.PNHO-080	5.PNHD-080	5.PNHP-080	5.0000-081
500 mg	0,80	5.PNHO-090	5.PNHD-090	5.PNHP-090	5.0000-091

* 1 mg - 5 mg made of aluminium

SETS

Nominal value	Qty.	Content	 Clean room plastic cases	 Beech wood box	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.
1 mg – 500 mg	12	1,11 g	5.XMFP-710	5.XMFB-710	5.0000-711

3-Part service case

Available for all classes of weights

1mg – 5kg


Price on request

Trolley

Available for all classes of weights

1mg – 10kg
1mg – 20kg


Price on request

Knob weights


BRASS* finely turned

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	 Beech wood box	 Service case	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	5.0000-Art.no.
1 g	1,0	5.KMFO-110	5.KMFD-110	5.KMFP-110	5.KMFB-110		...111
2 g	1,2	5.KMFO-120	5.KMFD-120	5.KMFP-120	5.KMFB-120		...121
5 g	1,6	5.KMFO-130	5.KMFD-130	5.KMFP-130	5.KMFB-130		...131
10 g	2,0	5.KMFO-140	5.KMFD-140	5.KMFP-140	5.KMFB-140		...141
20 g	2,5	5.KMFO-150	5.KMFD-150	5.KMFP-150	5.KMFB-150		...151
50 g	3,0	5.KMFO-160	5.KMFD-160	5.KMFP-160	5.KMFB-160		...161
100 g	5	5.KMFO-170	5.KMFD-170		5.KMFB-170		...171
200 g	10	5.KMFO-180	5.KMFD-180		5.KMFB-180		...181
500 g	25	5.KMFO-190	5.KMFD-190		5.KMFB-190		...191
1 kg	50	5.KMFO-210	5.KMFD-210		5.KMFB-210		...211
2 kg	100	5.KMFO-220	5.KMFD-220		5.KMFB-220		...221
5 kg	250	5.KMFO-230	5.KMFD-230		5.KMFB-230	5.KMFS-230	...231
10 kg	500	5.KMFO-240	5.KMFD-240		5.KMFB-240	5.KMFS-240	...241
20 kg	1.000	5.KMFO-250			5.KMFB-250	5.KMFS-250	...251

SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Beech wood box	 Service case	DAkks Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 g – 50 g	8	110 g	5.XAFP-560	5.XAFB-560	5.XAFS-560	5.0000-561
1 g – 100 g	9	210 g	5.XAFP-570	5.XAFB-570	5.XAFS-570	5.0000-571
1 g – 200 g	11	610 g	5.XAFP-580	5.XAFB-580	5.XAFS-580	5.0000-581
1 g – 500 g	12	1.110 g	5.XAFP-590	5.XAFB-590	5.XAFS-590	5.0000-591
1 g – 1 kg	13	2.110 g	5.XAFP-610	5.XAFB-610	5.XAFS-610	5.0000-611
1 g – 2 kg	15	6.110 g	5.XAFP-620	5.XAFB-620	5.XAFS-620	5.0000-621
1 g – 5 kg	16	11.110 g	5.XAFP-630	5.XAFB-630	5.XAFS-630	5.0000-631
1 g – 10 kg	17	21.110 g	5.XAFP-640	5.XAFB-640	5.XAFS-640	5.0000-641

SETS with mg- weights (flat polygonal sheets)

Nominal value	Qty.	Content	 Clean room plastic box	 Beech wood box	 Service case	DAkks Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 mg – 50 g	20	111,11 g	5.XMFP-760	5.XMFB-760	5.XMFS-760	5.0000-761
1 mg – 100 g	21	211,11 g	5.XMFP-770	5.XMFB-770	5.XMFS-770	5.0000-771
1 mg – 200 g	23	611,11 g	5.XMFP-780	5.XMFB-780	5.XMFS-780	5.0000-781
1 mg – 500 g	24	1.111,11 g	5.XMFP-790	5.XMFB-790	5.XMFS-790	5.0000-791
1 mg – 1 kg	25	2.111,11 g	5.XMFP-810	5.XMFB-810	5.XMFS-810	5.0000-811
1 mg – 2 kg	27	6.111,11 g	5.XMFP-820	5.XMFB-820	5.XMFS-820	5.0000-821
1 mg – 5 kg	28	11.111,11 g	5.XMFP-830	5.XMFB-830	5.XMFS-830	5.0000-831
1 mg – 10 kg	29	21.111,11 g	5.XMFP-840	5.XMFB-840	5.XMFS-840	5.0000-841

*as long as supplies last

Knob weights


STAINLESS STEEL HF12 finely turned

SINGLE WEIGHT

Nominal value	Tol.	without box	Plastic boxes with screwed top	Clean room plastic cases	Beech wood box	Service case	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	5.0000-Art.no.
1 g	1,0	5.KEFO-110	5.KEFD-110	5.KEFP-110	5.KEFB-110		...111
2 g	1,2	5.KEFO-120	5.KEFD-120	5.KEFP-120	5.KEFB-120		...121
5 g	1,6	5.KEFO-130	5.KEFD-130	5.KEFP-130	5.KEFB-130		...131
10 g	2,0	5.KEFO-140	5.KEFD-140	5.KEFP-140	5.KEFB-140		...141
20 g	2,5	5.KEFO-150	5.KEFD-150	5.KEFP-150	5.KEFB-150		...151
50 g	3,0	5.KEFO-160	5.KEFD-160	5.KEFP-160	5.KEFB-160		...161
100 g	5	5.KEFO-170	5.KEFD-170	5.KEFP-170	5.KEFB-170		...171
200 g	10	5.KEFO-180	5.KEFD-180	5.KEFP-180	5.KEFB-180		...181
500 g	25	5.KEFO-190	5.KEFD-190	5.KEFP-190	5.KEFB-190		...191
1 kg	50	5.KEFO-210	5.KEFD-210	5.KEFP-210	5.KEFB-210		...211
2 kg	100	5.KEFO-220	5.KEFD-220	5.KEFP-220	5.KEFB-220		...221
5 kg	250	5.KEFO-230	5.KEFD-230	5.KEFP-230	5.KEFB-230	5.KEFS-230	...231
10 kg	500	5.KEFO-240	5.KEFD-240	5.KEFP-240	5.KEFB-240	5.KEFS-240	...241
20 kg	1000	5.KEFO-250		5.KEFP-250	5.KEFB-250	5.KEFS-250	...251

SETS

Nominal value	Qty.	Content	Clean room plastic box	Beech wood box	Service case	DAkks Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 g – 50 g	8	110 g	5.XKFP-560	5.XKFB-560	5.XKFS-560	5.0000-561
1 g – 100 g	9	210 g	5.XKFP-570	5.XKFB-570	5.XKFS-570	5.0000-571
1 g – 200 g	11	610 g	5.XKFP-580	5.XKFB-580	5.XKFS-580	5.0000-581
1 g – 500 g	12	1.110 g	5.XKFP-590	5.XKFB-590	5.XKFS-590	5.0000-591
1 g – 1 kg	13	2.110 g	5.XKFP-610	5.XKFB-610	5.XKFS-610	5.0000-611
1 g – 2 kg	15	6.110 g	5.XKFP-620	5.XKFB-620	5.XKFS-620	5.0000-621
1 g – 5 kg	16	11.110 g	5.XKFP-630	5.XKFB-630	5.XKFS-630	5.0000-631
1 g – 10 kg	17	21.110 g	5.XKFP-640	5.XKFB-640	5.XKFS-640	5.0000-641

SETS with mg- weights (flat polygonal sheets)

Nominal value	Qty.	Content	Clean room plastic box	Beech wood box	Service case	DAkks Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 mg – 50 g	20	111,11 g	5.XFFP-760	5.XFFB-760	5.XFFS-760	5.0000-761
1 mg – 100 g	21	211,11 g	5.XFFP-770	5.XFFB-770	5.XFFS-770	5.0000-771
1 mg – 200 g	23	611,11 g	5.XFFP-780	5.XFFB-780	5.XFFS-780	5.0000-781
1 mg – 500 g	24	1.111,11 g	5.XFFP-790	5.XFFB-790	5.XFFS-790	5.0000-791
1 mg – 1 kg	25	2.111,11 g	5.XFFP-810	5.XFFB-810	5.XFFS-810	5.0000-811
1 mg – 2 kg	27	6.111,11 g	5.XFFP-820	5.XFFB-820	5.XFFS-820	5.0000-821
1 mg – 5 kg	28	11.111,11 g	5.XFFP-830	5.XFFB-830	5.XFFS-830	5.0000-831
1 mg – 10 kg	29	21.111,11 g	5.XFFP-840	5.XFFB-840	5.XFFS-840	5.0000-841

Hook weight



BRASS* finely turned

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	 Beech wood box	 Service case	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	5.0000-Art.no.
1 g	1,0	5.HMFO-110	5.HMFD-110	5.HMFP-110	5.HMFB-110		...111
2 g	1,2	5.HMFO-120	5.HMFD-120	5.HMFP-120	5.HMFB-120		...121
5 g	1,6	5.HMFO-130	5.HMFD-130	5.HMFP-130	5.HMFB-130		...131
10 g	2,0	5.HMFO-140	5.HMFD-140	5.HMFP-140	5.HMFB-140		...141
20 g	2,5	5.HMFO-150	5.HMFD-150	5.HMFP-150	5.HMFB-150		...151
50 g	3,0	5.HMFO-160	5.HMFD-160	5.HMFP-160	5.HMFB-160		...161
100 g	5	5.HMFO-170	5.HMFD-170	5.HMFP-170	5.HMFB-170		...171
200 g	10	5.HMFO-180	5.HMFD-180	5.HMFP-180	5.HMFB-180		...181
500 g	25	5.HMFO-190	5.HMFD-190	5.HMFP-190	5.HMFB-190		...191
1 kg	50	5.HMFO-210	5.HMFD-210	5.HMFP-210	5.HMFB-210		...211
2 kg	100	5.HMFO-220	5.HMFD-220	5.HMFP-220	5.HMFB-220		...221
5 kg	250	5.HMFO-230	5.HMFD-230	5.HMFP-230	5.HMFB-230	5.HMFS-230	...231
10 kg	500	5.HMFO-240	5.HMFD-240	5.HMFP-240	5.HMFB-240	5.HMFS-240	...241
20 kg	1000	5.HMFO-250		5.HMFP-250	5.HMFB-250	5.HMFS-250	...251
50 kg	2500	5.HMFO-260			5.HMFB-260	5.HMFS-260	...261

SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Beech wood box	 Service case	DAkks Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 g – 50 g	8	110 g	5.XHFP-560	5.XHFB-560	5.XHFS-560	5.0000-561
1 g – 100 g	9	210 g	5.XHFP-570	5.XHFB-570	5.XHFS-570	5.0000-571
1 g – 200 g	11	610 g	5.XHFP-580	5.XHFB-580	5.XHFS-580	5.0000-581
1 g – 500 g	12	1.110 g	5.XHFP-590	5.XHFB-590	5.XHFS-590	5.0000-591
1 g – 1 kg	13	2.110 g	5.XHFP-610	5.XHFB-610	5.XHFS-610	5.0000-611
1 g – 2 kg	15	6.110 g	5.XHFP-620	5.XHFB-620	5.XHFS-620	5.0000-621
1 g – 5 kg	16	11.110 g	5.XHFP-630	5.XHFB-630	5.XHFS-630	5.0000-631
1 g – 10 kg	17	21.110 g	5.XHFP-640	5.XHFB-640	5.XHFS-640	5.0000-641

*as long as supplies last



Hook weight



STAINLESS STEEL HF12 finely turned

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	 Beech wood box	 Service case	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	5.0000- Art.no.
1 g	1,0	5.HEFO-110	5.HEFD-110	5.HEFP-110	5.HEFB-110		...111
2 g	1,2	5.HEFO-120	5.HEFD-120	5.HEFP-120	5.HEFB-120		...121
5 g	1,6	5.HEFO-130	5.HEFD-130	5.HEFP-130	5.HEFB-130		...131
10 g	2,0	5.HEFO-140	5.HEFD-140	5.HEFP-140	5.HEFB-140		...141
20 g	2,5	5.HEFO-150	5.HEFD-150	5.HEFP-150	5.HEFB-150		...151
50 g	3,0	5.HEFO-160	5.HEFD-160	5.HEFP-160	5.HEFB-160		...161
100 g	5	5.HEFO-170	5.HEFD-170	5.HEFP-170	5.HEFB-170		...171
200 g	10	5.HEFO-180	5.HEFD-180	5.HEFP-180	5.HEFB-180		...181
500 g	25	5.HEFO-190	5.HEFD-190	5.HEFP-190	5.HEFB-190		...191
1 kg	50	5.HEFO-210	5.HEFD-210	5.HEFP-210	5.HEFB-210		...211
2 kg	100	5.HEFO-220	5.HEFD-220	5.HEFP-220	5.HEFB-220		...221
5 kg	250	5.HEFO-230	5.HEFD-230	5.HEFP-230	5.HEFB-230	5.HEFS-230	...231
10 kg	500	5.HEFO-240	5.HEFD-240	5.HEFP-240	5.HEFB-240	5.HEFS-240	...241
20 kg	1000	5.HEFO-250		5.HEFP-250	5.HEFB-250	5.HEFS-250	...251
50 kg	2500	5.HEFO-260			5.HEFB-260	5.HEFS-260	...261

SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Beech wood box	 Service case	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 g – 50 g	8	110 g	5.XUFP-560	5.XUFB-560	5.XUFS-560	5.0000-561
1 g – 100 g	9	210 g	5.XUFP-570	5.XUFB-570	5.XUFS-570	5.0000-571
1 g – 200 g	11	610 g	5.XUFP-580	5.XUFB-580	5.XUFS-580	5.0000-581
1 g – 500 g	12	1.110 g	5.XUFP-590	5.XUFB-590	5.XUFS-590	5.0000-591
1 g – 1 kg	13	2.110 g	5.XUFP-610	5.XUFB-610	5.XUFS-610	5.0000-611
1 g – 2 kg	15	6.110 g	5.XUFP-620	5.XUFB-620	5.XUFS-620	5.0000-621
1 g – 5 kg	16	11.110 g	5.XUFP-630	5.XUFB-630	5.XUFS-630	5.0000-631
1 g – 10 kg	17	21.110 g	5.XUFP-640	5.XUFB-640	5.XUFS-640	5.0000-641



Block weights

rectangular



SINGLE WEIGHT

CAST IRON black painted

Nominal value	Tol.	without box	 Leather cases	 Service case	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.
5 kg	250	5.BGSO-230	5.BGSL-230	5.BGSS-230	5.0000-231
10 kg	500	5.BGSO-240	5.BGSL-240	5.BGSS-240	5.0000-241
20 kg	1000	5.BGSO-250	5.BGSL-250	5.BGSS-250	5.0000-251
25 kg	1250	5.BGSO-450		5.BGSS-450	5.0000-451
50 kg	2500	5.BGSO-260		5.BGSS-260	5.0000-261



SINGLE WEIGHT

CAST IRON zinc sprayed

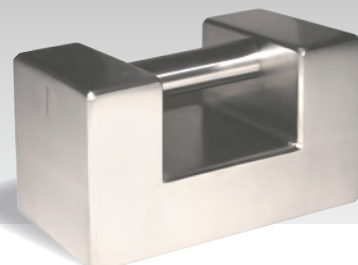
Nominal value	Tol.	without box	 Leather cases	 Service case	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.
5 kg	250	5.BGZO-230	5.BGZL-230	5.BGZS-230	5.0000-231
10 kg	500	5.BGZO-240	5.BGZL-240	5.BGZS-240	5.0000-241
20 kg	1000	5.BGZO-250	5.BGZL-250	5.BGZS-250	5.0000-251
25 kg	1250	5.BGZO-450		5.BGZS-450	5.0000-451
50 kg	2500	5.BGZO-260		5.BGZS-260	5.0000-261



SINGLE WEIGHT

STAINLESS STEEL HF12 polished / glass pearl blasted

Nominal value	Tol.	without box	 Leather cases	 Service case	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.
5 kg	250	5.BETO-230	5.BETL-230	5.BEGS-230	5.0000-231
10 kg	500	5.BETO-240	5.BETL-240	5.BEGS-240	5.0000-241
20 kg	1000	5.BETO-250	5.BETL-250	5.BEGS-250	5.0000-251
25 kg	1250	5.BETO-450		5.BEGS-450	5.0000-451
50 kg	2500	5.BETO-260		5.BEGS-260	5.0000-261



Block weights

round



STAINLESS STEEL HF12

polished / glass pearl blasted

SINGLE WEIGHT

Nominal value	Tol.	without box	 Service case	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.
5 kg	250	5.RETO-230	5.RETS-230	5.0000-231
10 kg	500	5.RETO-240	5.RETS-240	5.0000-241
20 kg	1000	5.RETO-250	5.RETS-250	5.0000-251
25 kg	1250	5.RETO-450	5.RETS-450	5.0000-451
50 kg	2500	5.RETO-260	5.RETS-260	5.0000-261

Basket weights

for round block weights



STAINLESS STEEL HF12

polished / glass pearl blasted

Nominal value	max. weight	Tol.	without box	DAkkS Calibration certificate
		+/- mg	Art.no.	Art.no.
20 kg	120 kg	1000	5.NETO-250	5.0000-251
40 kg	250 kg	2000	5.NETO-410	5.0000-411
50 kg	500 kg	2500	5.NETO-260	5.0000-261
60 kg	500 kg	3000	5.NETO-420	5.0000-421

for rectangular block weights

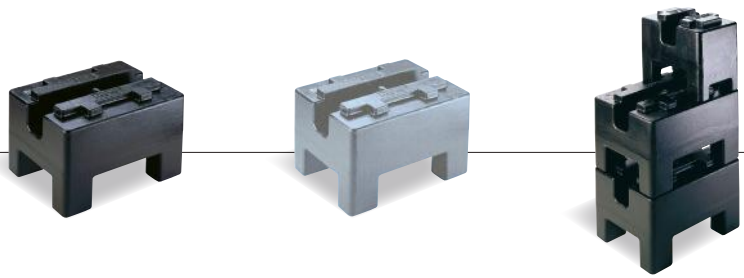


Nominal value	max. weight	Tol.	without box	DAkkS Calibration certificate
		+/- mg	Art.no.	Art.no.
20 kg	120 kg	1000	5.LETO-250	5.0000-251
40 kg	250 kg	2000	5.LETO-410	5.0000-411
50 kg	500 kg	2500	5.LETO-260	5.0000-261
60 kg	500 kg	3000	5.LETO-420	5.0000-421

Custom-made products according to customer specification.

Block weights

rectangular



SINGLE WEIGHT

Nominal value	Tol.	CAST IRON black painted		CAST IRON zinc sprayed		DAkkS Calibration certificate
		without box	without box	without box	without box	
	+/- g	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.
100 kg	5	5.BGSO-270	5.BGZO-270	5.0000-271		
200 kg	10	5.BGSO-280	5.BGZO-280	5.0000-281		
250 kg	12,5	5.BGSO-460	5.BGZO-460	5.0000-461		
500 kg	25	5.BGSO-290	5.BGZO-290	5.0000-291		
1000 kg	50	5.BGSO-310	5.BGZO-310	5.0000-311		
2000 kg	100	5.BGSO-320	5.BGZO-320	5.0000-321		

round with eyebolt



SINGLE WEIGHT

STAINLESS STEEL HF12 polished / glass pearl blasted

Nominal value	Tol.			DAkkS Calibration certificate
		without box	without box	
	+/- g	Art.no.	Art.no.	Art.no.
100 kg	5	5.BETO-270	5.0000-271	
200 kg	10	5.BETO-280	5.0000-281	
250 kg	12,5	5.BETO-460	5.0000-461	
500 kg	25	5.BETO-290	5.0000-291	
1000 kg	50	5.BETO-310	5.0000-311	
2000 kg	100	5.BETO-320	5.0000-321	

Rolling weights



CAST IRON black painted

SINGLE WEIGHT

Nominal value	Tol.			DAkkS Calibration certificate
		without box	without box	
	+/- g	Art.no.	Art.no.	Art.no.
100 kg	5	5.RGSO-270	5.0000-271	
200 kg	10	5.RGSO-280	5.0000-281	
500 kg	25	5.RGSO-290	5.0000-291	

Carrier weights



SINGLE WEIGHT

		BRASS** finely turned	STAINLESS STEEL HF12 finely turned	STEEL black finished	DAkKS Calibration certificate
Nominal value	Tol.	without box	without box	without box	
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.
1 g*	1,0	5.TMFO-110			5.0000-111
2 g*	1,2	5.TMFO-120			5.0000-121
5 g*	1,6	5.TMFO-130			5.0000-131
10 g*	2,0	5.TMFO-140	5.TEFO-140		5.0000-141
20 g*	2,5	5.TMFO-150	5.TEFO-150		5.0000-151
50 g*	3,0	5.TMFO-160	5.TEFO-160		5.0000-161
100 g*	5	5.TMFO-170	5.TEFO-170		5.0000-171
200 g*	10	5.TMFO-180	5.TEFO-180		5.0000-181
500 g*	25	5.TMFO-190	5.TEFO-190	5.TSBO-190	5.0000-191
1 kg	50	5.TMFO-210	5.TEFO-210	5.TSBO-210	5.0000-211
2 kg	100	5.TMFO-220	5.TEFO-220	5.TSBO-220	5.0000-221
5 kg	250	5.TMFO-230	5.TEFO-230	5.TSBO-230	5.0000-231
10 kg	500	5.TMFO-240	5.TEFO-240	5.TSBO-240	5.0000-241
20 kg	1000	5.TMFO-250	5.TEFO-250	5.TSBO-250	5.0000-251
50 kg	2500	5.TMFO-260	5.TEFO-260	5.TSBO-260	5.0000-261

*DAkKS calibration: Case necessary for weights ≤ 500 g. Price for storage case on demand.

**as long as supplies last

Slotted weights



SINGLE WEIGHT

		BRASS** finely turned	STAINLESS STEEL HF12 finely turned	CAST IRON black painted	DAkKS Calibration certificate
Nominal value	Tol.	without box	without box	without box	
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.
1 g*	1,0	5.IMFO-110	5.IEFO-110		5.0000-111
2 g*	1,2	5.IMFO-120	5.IEFO-120		5.0000-121
5 g*	1,6	5.IMFO-130	5.IEFO-130		5.0000-131
10 g*	2,0	5.IMFO-140	5.IEFO-140		5.0000-141
20 g*	2,5	5.IMFO-150	5.IEFO-150		5.0000-151
50 g*	3,0	5.IMFO-160	5.IEFO-160		5.0000-161
100 g*	5	5.IMFO-170	5.IEFO-170		5.0000-171
200 g*	10	5.IMFO-180	5.IEFO-180		5.0000-181
500 g*	25	5.IMFO-190	5.IEFO-190	5.IGSO-190	5.0000-191
1 kg	50	5.IMFO-210	5.IEFO-210	5.IGSO-210	5.0000-211
2 kg	100	5.IMFO-220	5.IEFO-220	5.IGSO-220	5.0000-221
5 kg	250	5.IMFO-230	5.IEFO-230	5.IGSO-230	5.0000-231
10 kg	500	5.IMFO-240	5.IEFO-240	5.IGSO-240	5.0000-241
20 kg	1000	5.IMFO-250	5.IEFO-250	5.IGSO-250	5.0000-251
50 kg	2500			5.IGSO-260	5.0000-261

*DAkKS calibration: Case necessary for weights ≤ 500 g. Price for storage case on demand.

**as long as supplies last

M2

Weights of medium accuracy M2

Adjustment, testing and calibration weights for commercial balances (class III) and for quality assurance of scales with steps $\leq 30\,000$ according to ISO 9001ff. Weights for calibration of weights of class M3.

Weights in the exclusive assortment case.

ACCESSORIES



All weight sets include gloves, two brushes and two tweezers.

Up to 50 g without big tweezers, big brush and gloves.



CLEAN ROOM
PLASTIC CASES



BEECH WOODEN
BOX



SERVICE
CASE

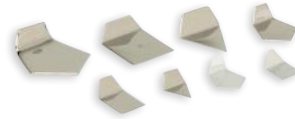


PLASTIC BOXES WITH
SCREWED TOP



LEATHER CASES

Milligramm weights


ALUMINIUM / NEUSILBER

Flat polygonal sheets

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	DAkKS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.
100 mg	1,6	4.PNHO-070	4.PNHD-070	4.0000-071
200 mg	2,0	4.PNHO-080	4.PNHD-080	4.0000-081
500 mg	2,5	4.PNHO-090	4.PNHD-090	4.0000-091

SETS

Nominal value	Qty.	Content	 Clean room plastic cases	 Beech wood box	DAkKS Calibration certificate
			Art.no.	Art.no.	Art.no.
100 mg – 500 mg	12	1,11 g	4.XMFP-710	4.XMFB-710	4.0000-711

3-Part service case

Available for all classes of weights

1mg – 5kg



Price on request

Trolley

Available for all classes of weights

1mg – 10kg

1mg – 20kg



Price on request

Knob weights


BRASS* finely turned

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	 Beech wood box	 Service case	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	4.0000-Art.no.
1 g	3	4.KMFO-110	4.KMFD-110	4.KMFP-110	4.KMFB-110		...111
2 g	4	4.KMFO-120	4.KMFD-120	4.KMFP-120	4.KMFB-120		...121
5 g	5	4.KMFO-130	4.KMFD-130	4.KMFP-130	4.KMFB-130		...131
10 g	6	4.KMFO-140	4.KMFD-140	4.KMFP-140	4.KMFB-140		...141
20 g	8	4.KMFO-150	4.KMFD-150	4.KMFP-150	4.KMFB-150		...151
50 g	10	4.KMFO-160	4.KMFD-160	4.KMFP-160	4.KMFB-160		...161
100 g	16	4.KMFO-170	4.KMFD-170		4.KMFB-170		...171
200 g	30	4.KMFO-180	4.KMFD-180		4.KMFB-180		...181
500 g	80	4.KMFO-190	4.KMFD-190		4.KMFB-190		...191
1 kg	160	4.KMFO-210	4.KMFD-210		4.KMFB-210		...211
2 kg	300	4.KMFO-220	4.KMFD-220		4.KMFB-220		...221
5 kg	800	4.KMFO-230	4.KMFD-230		4.KMFB-230		...231
10 kg	1600	4.KMFO-240	4.KMFD-240		4.KMFB-240	4.KMFS-240	...241
20 kg	3000	4.KMFO-250			4.KMFB-250	4.KMFS-250	...251

SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Beech wood box	 Service case	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 g – 50 g	8	110 g	4.XAFP-560	4.XAFB-560	4.XAFS-560	4.0000-561
1 g – 100 g	9	210 g	4.XAFP-570	4.XAFB-570	4.XAFS-570	4.0000-571
1 g – 200 g	11	610 g	4.XAFP-580	4.XAFB-580	4.XAFS-580	4.0000-581
1 g – 500 g	12	1.110 g	4.XAFP-590	4.XAFB-590	4.XAFS-590	4.0000-591
1 g – 1 kg	13	2.110 g	4.XAFP-610	4.XAFB-610	4.XAFS-610	4.0000-611
1 g – 2 kg	15	6.110 g	4.XAFP-620	4.XAFB-620	4.XAFS-620	4.0000-621
1 g – 5 kg	16	11.110 g	4.XAFP-630	4.XAFB-630	4.XAFS-630	4.0000-631
1 g – 10 kg	17	21.110 g	4.XAFP-640	4.XAFB-640	4.XAFS-640	4.0000-641

SETS with mg- weights (flat polygonal sheets)

Nominal value	Qty.	Content	 Clean room plastic box	 Beech wood box	 Service case	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
100 mg – 50 g	20	110,9 g	4.XMFP-760	4.XMFB-760	4.XMFS-760	4.0000-761
100 mg – 100 g	21	210,9 g	4.XMFP-770	4.XMFB-770	4.XMFS-770	4.0000-771
100 mg – 200 g	23	610,9 g	4.XMFP-780	4.XMFB-780	4.XMFS-780	4.0000-781
100 mg – 500 g	24	1.110,9 g	4.XMFP-790	4.XMFB-790	4.XMFS-790	4.0000-791
100 mg – 1 kg	25	2.110,9 g	4.XMFP-810	4.XMFB-810	4.XMFS-810	4.0000-811
100 mg – 2 kg	27	6.110,9 g	4.XMFP-820	4.XMFB-820	4.XMFS-820	4.0000-821
100 mg – 5 kg	28	11.110,9 g	4.XMFP-830	4.XMFB-830	4.XMFS-830	4.0000-831
100 mg – 10 kg	29	21.110,9 g	4.XMFP-840	4.XMFB-840	4.XMFS-840	4.0000-841

*as long as supplies last

Hook weight


BRASS* finely turned

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clean room plastic cases	 Beech wood box	 Service case	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	4.0000-Art.no.
1 g	3	4.HMFO-110	4.HMFD-110	4.HMFP-110	4.HMFB-110		...111
2 g	4	4.HMFO-120	4.HMFD-120	4.HMFP-120	4.HMFB-120		...121
5 g	5	4.HMFO-130	4.HMFD-130	4.HMFP-130	4.HMFB-130		...131
10 g	6	4.HMFO-140	4.HMFD-140	4.HMFP-140	4.HMFB-140		...141
20 g	8	4.HMFO-150	4.HMFD-150	4.HMFP-150	4.HMFB-150		...151
50 g	10	4.HMFO-160	4.HMFD-160	4.HMFP-160	4.HMFB-160		...161
100 g	16	4.HMFO-170	4.HMFD-170		4.HMFB-170		...171
200 g	30	4.HMFO-180	4.HMFD-180		4.HMFB-180		...181
500 g	80	4.HMFO-190	4.HMFD-190		4.HMFB-190		...191
1 kg	160	4.HMFO-210	4.HMFD-210		4.HMFB-210		...211
2 kg	300	4.HMFO-220	4.HMFD-220		4.HMFB-220		...221
5 kg	800	4.HMFO-230	4.HMFD-230		4.HMFB-230	4.HMFS-230	...231
10 kg	1600	4.HMFO-240	4.HMFD-240		4.HMFB-240	4.HMFS-240	...241
20 kg	3000	4.HMFO-250			4.HMFB-250	4.HMFS-250	...251
50 kg	8000	4.HMFO-260			4.HMFB-260	4.HMFS-260	...261

SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Beech wood box	 Service case	DAkks Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 g – 50 g	8	110 g	4.XHFP-560	4.XHFB-560	4.XHFS-560	4.0000-561
1 g – 100 g	9	210 g	4.XHFP-570	4.XHFB-570	4.XHFS-570	4.0000-571
1 g – 200 g	11	610 g	4.XHFP-580	4.XHFB-580	4.XHFS-580	4.0000-581
1 g – 500 g	12	1.110 g	4.XHFP-590	4.XHFB-590	4.XHFS-590	4.0000-591
1 g – 1 kg	13	2.110 g	4.XHFP-610	4.XHFB-610	4.XHFS-610	4.0000-611
1 g – 2 kg	15	6.110 g	4.XHFP-620	4.XHFB-620	4.XHFS-620	4.0000-621
1 g – 5 kg	16	11.110 g	4.XHFP-630	4.XHFB-630	4.XHFS-630	4.0000-631
1 g – 10 kg	17	21.110 g	4.XHFP-640	4.XHFB-640	4.XHFS-640	4.0000-641

*as long as supplies last



Block weights


CAST IRON black painted

rectangular

SINGLE WEIGHT

Nominal value	Tol.	without box	 Leather cases	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.
5 kg	800	4.BGSO-230	4.BGSL-230	4.0000-231
10 kg	1600	4.BGSO-240	4.BGSL-240	4.0000-241
20 kg	3000	4.BGSO-250	4.BGSL-250	4.0000-251
25 kg	4000	4.BGSO-450		4.0000-451
50 kg	8000	4.BGSO-260		4.0000-261



SINGLE WEIGHT

Nominal value	Tol.	without box	DAkkS Calibration certificate
	+/- g	Art.no.	Art.no.
100 kg	16	4.BGSO-270	4.0000-271
200 kg	30	4.BGSO-280	4.0000-281
250 kg	40	4.BGSO-460	4.0000-461
500 kg	80	4.BGSO-290	4.0000-291
1000 kg	160	4.BGSO-310	4.0000-311
2000 kg	300	4.BGSO-320	4.0000-321



Rolling weights


CAST IRON black painted

SINGLE WEIGHT

Nominal value	Tol.	without box	DAkkS Calibration certificate
	+/- g	Art.no.	Art.no.
100 kg	16	4.RGSO-270	4.0000-271
200 kg	30	4.RGSO-280	4.0000-281
500 kg	80	4.RGSO-290	4.0000-291

Carrier weights



SINGLE WEIGHT

BRASS**
finely turned

STEEL
black finished

Nominal value	Tol.	without box		DAkkS Calibration certificate
		Art.no.	Art.no.	Art.no.
10 g*	6	4.TMFO-140		4.0000-141
20 g*	8	4.TMFO-150		4.0000-151
50 g*	10	4.TMFO-160		4.0000-161
100 g*	16	4.TMFO-170		4.0000-171
200 g*	30	4.TMFO-180		4.0000-181
500 g*	80	4.TMFO-190	4.TSBO-190	4.0000-191
1 kg	160	4.TMFO-210	4.TSBO-210	4.0000-211
2 kg	300	4.TMFO-220	4.TSBO-220	4.0000-221
5 kg	800	4.TMFO-230	4.TSBO-230	4.0000-231
10 kg	1600	4.TMFO-240	4.TSBO-240	4.0000-241
20 kg	3000	4.TMFO-250	4.TSBO-250	4.0000-251
50 kg	8000	4.TMFO-260	4.TSBO-260	4.0000-261

*DAkkS calibration: Case necessary for weights ≤ 500 g. Price for storage case on demand.

**as long as supplies last



Slotted weights

SINGLE WEIGHT

BRASS**
finely turned

CAST IRON
black painted

Nominal value	Tol.	without box		DAkkS Calibration certificate
		Art.no.	Art.no.	Art.no.
1 g*	3	4.IMFO-110		4.0000-111
2 g*	4	4.IMFO-120		4.0000-121
5 g*	5	4.IMFO-130		4.0000-131
10 g*	6	4.IMFO-140		4.0000-141
20 g*	8	4.IMFO-150		4.0000-151
50 g*	10	4.IMFO-160		4.0000-161
100 g*	16	4.IMFO-170		4.0000-171
200 g*	30	4.IMFO-180		4.0000-181
500 g*	80	4.IMFO-190	4.IGSO-190	4.0000-191
1 kg	160	4.IMFO-210	4.IGSO-210	4.0000-211
2 kg	300	4.IMFO-220	4.IGSO-220	4.0000-221
5 kg	800	4.IMFO-230	4.IGSO-230	4.0000-231
10 kg	1600	4.IMFO-240	4.IGSO-240	4.0000-241
20 kg	3000	4.IMFO-250	4.IGSO-250	4.0000-251
50 kg	8000	4.IMFO-260	4.IGSO-260	4.0000-261

*DAkkS calibration: Case necessary for weights ≤ 500 g. Price for storage case on demand.

**as long as supplies last

M3

Commercial weights - class M3

Adjustment, testing and calibration weights for ordinary scales (class IV) and for quality assurance of scales with steps ≤ 1000 according to ISO 9001ff. Weights for the usage combined with commercial balances (class III) and ordinary scales (class IV). Learning aids for schools and apprenticeship. Load tests for lifting, crane and vehicle systems.

Weights in the exclusive assortment case.

ACCESSORIES



All weight sets include gloves, two brushes and two tweezers.

Up to 50 g without big tweezers, big brush and gloves.



CLEAR ROOM
PLASTIC CASES



BEECH WOOD
BOX



SERVICE
CASE



PLASTIC BOXES WITH
SCREWED TOP



LEATHER CASES

Knob weights


BRASS* finely turned

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clear room plastic cases	 Beech wood box	 Service case	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	3.0000-Art.no.
1 g	10	3.CMFO-110	3.CMFD-110	3.CMFP-110	3.CMFB-110		...111
2 g	12	3.CMFO-120	3.CMFD-120	3.CMFP-120	3.CMFB-120		...121
5 g	16	3.CMFO-130	3.CMFD-130	3.CMFP-130	3.CMFB-130		...131
10 g	20	3.CMFO-140	3.CMFD-140	3.CMFP-140	3.CMFB-140		...141
20 g	25	3.CMFO-150	3.CMFD-150	3.CMFP-150	3.CMFB-150		...151
50 g	30	3.CMFO-160	3.CMFD-160	3.CMFP-160	3.CMFB-160		...161
100 g	50	3.CMFO-170	3.CMFD-170		3.CMFB-170		...171
200 g	100	3.CMFO-180	3.CMFD-180		3.CMFB-180		...181
500 g	250	3.CMFO-190	3.CMFD-190		3.CMFB-190		...191
1 kg	500	3.CMFO-210	3.CMFD-210		3.CMFB-210		...211
2 kg	1000	3.CMFO-220	3.CMFD-220		3.CMFB-220		...221
5 kg	2500	3.CMFO-230	3.CMFD-230		3.CMFB-230	3.CMFS-230	...231
10 kg	5000	3.CMFO-240	3.CMFD-240		3.CMFB-240	3.CMFS-240	...241

SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Beech wood box	 Service case	DAkkS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 g – 50 g	8	110 g	3.XCFP-560	3.XCFB-560	3.XCFS-560	3.0000-561
1 g – 100 g	9	210 g	3.XCFP-570	3.XCFB-570	3.XCFS-570	3.0000-571
1 g – 200 g	11	610 g	3.XCFP-580	3.XCFB-580	3.XCFS-580	3.0000-581
1 g – 500 g	12	1.110 g	3.XCFP-590	3.XCFB-590	3.XCFS-590	3.0000-591
1 g – 1 kg	13	2.110 g	3.XCFP-610	3.XCFB-610	3.XCFS-610	3.0000-611
1 g – 2 kg	15	6.110 g	3.XCFP-620	3.XCFB-620	3.XCFS-620	3.0000-621
1 g – 5 kg	16	11.110 g	3.XCFP-630	3.XCFB-630	3.XCFS-630	3.0000-631
1 g – 10 kg	17	21.110 g	3.XCFP-640	3.XCFB-640	3.XCFS-640	3.0000-641

*as long as supplies last

3-Part service case

Available for all classes of weights

1mg – 5kg



Price on request

Trolley

Available for all classes of weights

1mg – 10kg

1mg – 20kg



Price on request

Knob weights

OIML R111


BRASS* finely turned

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clear room plastic cases	 Beech wood box	 Service case	DAKKS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	3.0000-Art.no.
1 g	10	3.KMFO-110	3.KMFD-110	3.KMFP-110	3.KMFB-110	27,-	...111
2 g	12	3.KMFO-120	3.KMFD-120	3.KMFP-120	3.KMFB-120	27,-	...121
5 g	16	3.KMFO-130	3.KMFD-130	3.KMFP-130	3.KMFB-130	28,-	...131
10 g	20	3.KMFO-140	3.KMFD-140	3.KMFP-140	3.KMFB-140	28,-	...141
20 g	25	3.KMFO-150	3.KMFD-150	3.KMFP-150	3.KMFB-150	30,-	...151
50 g	30	3.KMFO-160	3.KMFD-160	3.KMFP-160	3.KMFB-160	32,-	...161
100 g	50	3.KMFO-170	3.KMFD-170		3.KMFB-170	35,-	...171
200 g	100	3.KMFO-180	3.KMFD-180		3.KMFB-180	38,-	...181
500 g	250	3.KMFO-190	3.KMFD-190		3.KMFB-190	54,-	...191
1 kg	500	3.KMFO-210	3.KMFD-210		3.KMFB-210	74,-	...211
2 kg	1000	3.KMFO-220	3.KMFD-220		3.KMFB-220	123,-	...221
5 kg	2500	3.KMFO-230	3.KMFD-230		3.KMFB-230	250,-	3.KMFS-230 ...231
10 kg	5000	3.KMFO-240	3.KMFD-240		3.KMFB-240	460,-	3.KMFS-240 ...241
20 kg	10000	3.KMFO-250			3.KMFB-250	890,-	3.KMFS-250 ...251

SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Beech wood box	 Service case	DAKKS Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 g – 50 g	8	110 g	3.XAFP-560	3.XAFB-560	3.XAFS-560	3.0000-561
1 g – 100 g	9	210 g	3.XAFP-570	3.XAFB-570	3.XAFS-570	3.0000-571
1 g – 200 g	11	610 g	3.XAFP-580	3.XAFB-580	3.XAFS-580	3.0000-581
1 g – 500 g	12	1.110 g	3.XAFP-590	3.XAFB-590	3.XAFS-590	3.0000-591
1 g – 1 kg	13	2.110 g	3.XAFP-610	3.XAFB-610	3.XAFS-610	3.0000-611
1 g – 2 kg	15	6.110 g	3.XAFP-620	3.XAFB-620	3.XAFS-620	3.0000-621
1 g – 5 kg	16	11.110 g	3.XAFP-630	3.XAFB-630	3.XAFS-630	3.0000-631
1 g – 10 kg	17	21.110 g	3.XAFP-640	3.XAFB-640	3.XAFS-640	3.0000-641

*as long as supplies last



Hook weight


BRASS* finely turned

SINGLE WEIGHT

Nominal value	Tol.	without box	 Plastic boxes with screwed top	 Clear room plastic cases	 Beech wood box	 Service case	DAkks Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.	3.0000-Art.no.
1 g	10	3.HMFO-110	3.HMFD-110	3.HMFP-110	3.HMFB-110		...111
2 g	12	3.HMFO-120	3.HMFD-120	3.HMFP-120	3.HMFB-120		...121
5 g	16	3.HMFO-130	3.HMFD-130	3.HMFP-130	3.HMFB-130		...131
10 g	20	3.HMFO-140	3.HMFD-140	3.HMFP-140	3.HMFB-140		...141
20 g	25	3.HMFO-150	3.HMFD-150	3.HMFP-150	3.HMFB-150		...151
50 g	30	3.HMFO-160	3.HMFD-160	3.HMFP-160	3.HMFB-160		...161
100 g	50	3.HMFO-170	3.HMFD-170		3.HMFB-170		...171
200 g	100	3.HMFO-180	3.HMFD-180		3.HMFB-180		...181
500 g	250	3.HMFO-190	3.HMFD-190		3.HMFB-190		...191
1 kg	500	3.HMFO-210	3.HMFD-210		3.HMFB-210		...211
2 kg	1000	3.HMFO-220	3.HMFD-220		3.HMFB-220		...221
5 kg	2500	3.HMFO-230	3.HMFD-230		3.HMFB-230	3.HMFS-230	...231
10 kg	5000	3.HMFO-240	3.HMFD-240		3.HMFB-240	3.HMFS-240	...241
20 kg	10000	3.HMFO-250			3.HMFB-250	3.HMFS-250	...251
50 kg	25000	3.HMFO-260			3.HMFB-260	3.HMFS-260	...261

SETS

Nominal value	Qty.	Content	 Clean room plastic box	 Beech wood box	 Service case	DAkks Calibration certificate
			Art.no.	Art.no.	Art.no.	Art.no.
1 g – 50 g	8	110 g	3.XHFP-560	3.XHFB-560	3.XHFS-560	3.0000-561
1 g – 100 g	9	210 g	3.XHFP-570	3.XHFB-570	3.XHFS-570	3.0000-571
1 g – 200 g	11	610 g	3.XHFP-580	3.XHFB-580	3.XHFS-580	3.0000-581
1 g – 500 g	12	1.110 g	3.XHFP-590	3.XHFB-590	3.XHFS-590	3.0000-591
1 g – 1 kg	13	2.110 g	3.XHFP-610	3.XHFB-610	3.XHFS-610	3.0000-611
1 g – 2 kg	15	6.110 g	3.XHFP-620	3.XHFB-620	3.XHFS-620	3.0000-621
1 g – 5 kg	16	11.110 g	3.XHFP-630	3.XHFB-630	3.XHFS-630	3.0000-631
1 g – 10 kg	17	21.110 g	3.XHFP-640	3.XHFB-640	3.XHFS-640	3.0000-641

*as long as supplies last



Cast Iron Weights


CAST IRON black painted

DIN 1924

Knob weights
– with hook

Nominal value	Tol.	without box		without box	DAkkS Calibration certificate
	+/- mg	Art.no.		Art.no.	Art.no.
100 g	50	3.CGSO-170			3.0000-171
200 g	100	3.CGSO-180			3.0000-181
500 g	250	3.CGSO-190		3.VGSO-190	3.0000-191
1 kg	500	3.CGSO-210		3.VGSO-210	3.0000-211
2 kg	1000	3.CGSO-220		3.VGSO-220	3.0000-221
5 kg	2500	3.CGSO-230		3.VGSO-230	3.0000-231
10 kg	5000	3.CGSO-240		3.VGSO-240	3.0000-241
20 kg	10000	3.CGSO-250			3.0000-251
50 kg	25000	3.CGSO-260			3.0000-261

Block weights


CAST IRON black painted

rectangular

SINGLE WEIGHT

Nominal value	Tol.	without box	 Leather cases	 Service case	DAkkS Calibration certificate
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.
5 kg	2500	3.BGSO-230	3.BGSL-230	3.BGSS-230	3.0000-231
10 kg	5000	3.BGSO-240	3.BGSL-240	3.BGSS-240	3.0000-241
20 kg	10000	3.BGSO-250	3.BGSL-250	3.BGSS-250	3.0000-251
25 kg	12500	3.BGSO-450		3.BGSS-450	3.0000-451
50 kg	25000	3.BGSO-260		3.BGSS-260	3.0000-261

Block weights



Rolling weights

CAST IRON black painted

Nominal value	Tol.	without box		without box	DAkkS Calibration certificate
	+/- g	Art.no.		Art.no.	Art.no.
100 kg	50	3.BGSO-270		3.RGSO-270	3.0000-271
200 kg	100	3.BGSO-280		3.RGSO-280	3.0000-281
250 kg	125	3.BGSO-460			3.0000-461
500 kg	250	3.BGSO-290		3.RGSO-290	3.0000-291
1000 kg	500	3.BGSO-310			3.0000-311
2000 kg	1000	3.BGSO-320			3.0000-321

Carrier weights



SINGLE WEIGHT

Nominal value	Tol.	BRASS** finely turned		STEEL black finished		DAkkS Calibration certificate
		without box	without box	without box	without box	
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.
500 g*	250	3.TMFO-190	3.TSBO-190	3.0000-191	3.0000-191	
1 kg	500	3.TMFO-210	3.TSBO-210	3.0000-211	3.0000-211	
2 kg	1000	3.TMFO-220	3.TSBO-220	3.0000-221	3.0000-221	
5 kg	2500	3.TMFO-230	3.TSBO-230	3.0000-231	3.0000-231	
10 kg	5000	3.TMFO-240	3.TSBO-240	3.0000-241	3.0000-241	
20 kg	10000	3.TMFO-250	3.TSBO-250	3.0000-251	3.0000-251	
50 kg	25000	3.TMFO-260	3.TSBO-260	3.0000-261	3.0000-261	

*DAkkS calibration: Case necessary for weights ≤ 500 g. Price for storage case on demand.

**as long as supplies last



Slotted weights

SINGLE WEIGHT

Nominal value	Tol.	BRASS** finely turned		CAST IRON black painted		DAkkS Calibration certificate
		without box	without box	without box	without box	
	+/- mg	Art.no.	Art.no.	Art.no.	Art.no.	Art.no.
500 g*	250	3.IMFO-190	3.IGSO-190	3.0000-191	3.0000-191	
1 kg	500	3.IMFO-210	3.IGSO-210	3.0000-211	3.0000-211	
2 kg	1000	3.IMFO-220	3.IGSO-220	3.0000-221	3.0000-221	
5 kg	2500	3.IMFO-230	3.IGSO-230	3.0000-231	3.0000-231	
10 kg	5000	3.IMFO-240	3.IGSO-240	3.0000-241	3.0000-241	
20 kg	10000	3.IMFO-250	3.IGSO-250	3.0000-251	3.0000-251	
50 kg	25000		3.IGSO-260	3.0000-261	3.0000-261	

*DAkkS calibration: Case necessary for weights ≤ 500 g. Price for storage case on demand.

**as long as supplies last



Accessories for weights

Accessories that ease your work. The accessories by HÄFNER include everything you need for storage, handling, quality assurance and management of your test weights, e.g. bell jars with base, tweezers, brushes, gloves, weight forks and weight handles, storage boxes for single weights, service cases, measurement devices.

Safe storage of your weights



Bell jars

with base

Size	Diameter x Height	Using for sets	Using for single weights	Art.no.
1	105 x 18 mm	1 mg - 5 g		1.1YYY - 010 on request
2	75 x 55 mm	bis 100 g	max. 200 g	1.1YYY - 020 on request
3	125 x 90 mm	10 g - 200 g	max. 1 kg	1.1YYY - 030 on request
4	150 x 150 mm	1 mg - 200 g	max. 2 kg	1.1YYY - 040 on request
5	150 x 200 mm	100 g - 1 kg	max. 5 kg	1.1YYY - 050 on request
6	200 x 200 mm	bis 2 kg	2 kg + 5 kg	1.1YYY - 060 on request
7	180 x 250 mm		10 kg	1.1YYY - 070 on request
8	200 x 300 mm		20 kg	1.1YYY - 080 on request
9	300 x 400 mm		50 kg	1.1YYY - 090 on request



Plastic boxes with screwed top

Plastic



Size	suitable	Art.no.
on top and bottom with foam inserts		
1	mg	1.6YYD-200
2	mg	1.6YYD-400

Size	suitable	Art.no.
inside around with foam upholstert		
2	1 g - 20 g	1.6YYD-150
3	50 g	1.6YYD-160
3	100 g	1.6YYD-170
4	200 g	1.6YYD-180
5	500 g	1.6YYD-190
6	1 kg	1.6YYD-210
7	2 kg	1.6YYD-220
8	5 kg	1.6YYD-230
9	10 kg	1.6YYD-240

Clean room plastic cases



SINGLE WEIGHT

Size	suitable	Art.no.
with flaked recesses, including carbon tweezers 105 mm		
1	1 mg - 5 g, 3 x mg, 1 x 1 g, 2 x 2 g, 1 x 5 g	1.6YYP-010
2	10 g - 50 g, 1 x 10 g, 1 x 20 g, 1 x 50 g	1.6YYP-020

SETS for sets 1mg-500mg resp. 1mg-5g

Size	suitable	Configuration	Art.no.
without coating			
1	1 mg - 500 mg	mg	1.6YYP-710
2	1 mg - 5 g	mit Einsatz 1g- 5g	1.6YYP-720
mg with antistatic stainless steel coating			
3	1 mg - 500 mg	mg	1.6YYP-730
4	1 mg - 5 g		1.6YYP-740

Clean room plastic box

Foam inserts with recesses

SETS up to 500 g resp. 5 kg

Size	suitable	Art.no.
hinged lid for keeping certificates		
1	1 g-max. 500 g	1.6YYS-810
1	1 mg-max. 500 g	mg- Insert 1.6YYS-820

Size	suitable	Art.no.
hinged lid for keeping certificates		
2	1 g-max. 5 kg	1.6YYS-830
2	1 mg-5 kg	mg- Insert 1.6YYS-840



Mahogany wooden box

Class E0 / E1 / E2 / F1

SINGLE WEIGHT

Nominal value	Art.no.
1 mg - 500 mg	9.KEOM-090
1 g	9.KEOM-110
2 g	9.KEOM-120
5 g	9.KEOM-130
10 g	9.KEOM-140
20 g	9.KEOM-150
50 g	9.KEOM-160
100 g	9.KEOM-170
200 g	9.KEOM-180
500 g	9.KEOM-190
1 kg	9.KEOM-210
2 kg	9.KEOM-220
5 kg	9.KEOM-230
10 kg	9.KEOM-240
20 kg	9.KEOM-250
50 kg	9.KEOM-260



SETS

Nominal value	Art.no.
1 g - 50 g	9.XTOM-560
1 g - 100 g	9.XTOM-570
1 g - 200 g	9.XTOM-580
1 g - 500 g	9.XTOM-590
1 g - 1 kg	9.XTOM-610
1 g - 2 kg	9.XTOM-620
1 g - 5 kg	9.XTOM-630
1 g - 10 kg	9.XTOM-640
1 mg - 5 g	9.XEOM-730
1 mg - 50 g	9.XEOM-760
1 mg - 100 g	9.XEOM-770
1 mg - 200 g	9.XEOM-780
1 mg - 500 g	9.XEOM-790
1 mg - 1 kg	9.XEOM-810
1 mg - 2 kg	9.XEOM-820
1 mg - 5 kg	9.XEOM-830
1 mg - 10 kg	9.XEOM-840



Beech wood box

Class F2 / M1 / M2 / M3

Knob weights

SINGLE WEIGHT

Nominal value	Art.no.
1 g	6.KEOB-110
2 g	6.KEOB-120
5 g	6.KEOB-130
10 g	6.KEOB-140
20 g	6.KEOB-150
50 g	6.KEOB-160
100 g	6.KEOB-170
200 g	6.KEOB-180
500 g	6.KEOB-190
1 kg	6.KEOB-210
2 kg	6.KEOB-220
5 kg	6.KEOB-230
10 kg	6.KEOB-240
20 kg	6.KEOB-250
50 kg	6.KEOB-260



SETS

Nominal value	Art.no.
1 g - 50 g	5.XAOB-560
1 g - 100 g	5.XAOB-570
1 g - 200 g	5.XAOB-580
1 g - 500 g	5.XAOB-590
1 g - 1 kg	5.XAOB-610
1 g - 2 kg	5.XAOB-620
1 g - 5 kg	5.XAOB-630
1 g - 10 kg	5.XAOB-640
1 mg - 50 g	5.XMOB-760
1 mg - 100 g	5.XMOB-770
1 mg - 200 g	5.XMOB-780
1 mg - 500 g	5.XMOB-790
1 mg - 1 kg	5.XMOB-810
1 mg - 2 kg	5.XMOB-820
1 mg - 5 kg	5.XMOB-830
1 mg - 10 kg	5.XMOB-840



Service case

Aluminium



SINGLE WEIGHT

Size	suitable	Art.no.
1	5 kg	1.6YY6-230
2	10 kg	1.6YY6-240
3	20 kg	1.6YY6-250
4	25 kg	1.6YY6-450
5	50 kg	1.6YY6-260

SETS

Size	suitable	Art.no.
6	bis 5 g	1.6YY6-530
7	bis 50 g	1.6YY6-560
8	bis 100 g	1.6YY6-570
9	bis 500 g	1.6YY6-590
10	bis 1 kg	1.6YY6-610
11	bis 2 kg	1.6YY6-620
12	bis 5 kg	1.6YY6-630
13	bis 10 kg	1.6YY6-640

Clean room case



SETS

Size	suitable	Art.no.
removeable inserts		
1	1 g - 1 kg	1.6YYR-110
2	1 g - 2 kg	1.6YYR-120
3	1 g - 5 kg	1.6YYR-130
4	1 mg - 1 kg	1.6YYR-140
5	1 mg - 2 kg	1.6YYR-150
6	1 mg - 5 kg	1.6YYR-160

SINGLE WEIGHT

Size	suitable	Art.no.
removeable inserts		
7	5 kg	1.6YYR-170
8	10 kg	1.6YYR-180
9	20 kg	1.6YYR-190

Leather cases

rectangular block weights



SETS

Size	suitable	Art.no.
1	5 kg	1.6YYL-330
2	10 kg	1.6YYL-340
3	20 kg	1.6YYL-350

Tweezers



STANDARDS

Size	Length	Using for	Description	Art.no.
1	105 mm	up to 50 g	Stainless steel cranked	1.3YYY-010
2	160 mm	up to 200 g	Stainless steel cranked	1.3YYY-020
3	250 mm	up to 500 g	Stainless steel straight with seat pans	1.3YYY-030
4	300 mm	up to 500 g	Stainless steel straight	1.3YYY-040

CARBON Stainless steel with bolted, removable carbon tips

Size	Length	Using for	Art.no.
Total carbon cranked, with seat pans			
5	105 mm	up to 50 g	1.3YYY-050
cranked with seat pans			
6	105 mm	up to 50 g *	1.3YYY-060
7	155 mm	up to 200 g *	1.3YYY-070
8	185 mm	up to 200 g *	1.3YYY-080
9	200 mm	up to 200 g *	1.3YYY-090

Gloves



Size	Description	Art.no.
Cotton gloves, thin		
S	Women's size	1.2YYY-010
L	Men's size	1.2YYY-020
Cotton gloves, strong		
S	Women's size	1.2YYY-030
L	Men's size	1.2YYY-040

Size	Description	Art.no.
Micro fiber gloves		
S	Women's size	1.2YYY-050
L	Men's size	1.2YYY-060
Leather gloves with cotton on the back of the hand		
S	Women's size	1.2YYY-070
M	Intermediate size	1.2YYY-080
L	Men's size	1.2YYY-090

Forks



Size	Description	Art.no.
1	500 g-Fork	1.3YYY-190
2	1 kg-Fork	1.3YYY-210
3	2 kg-Fork	1.3YYY-220
4	5 kg-Fork	1.3YYY-230

Handles

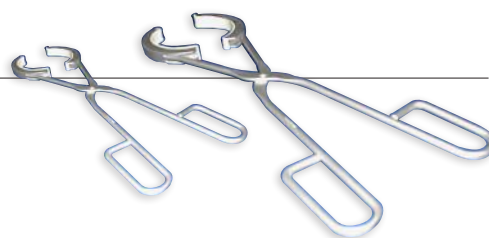


Size	Description	Art.no.
5	10 kg-Handle	1.3YYY-240
6	20 kg-Handle	1.3YYY-250
7	50 kg-Handle	1.3YYY-260

Tongs

Normal standards

Size	Description	Art.no.
1	Universal tongs with silicone inserts, up to 2 kg	1.3YYY-310
2	Tong for 1 kg-E0	1.3YYY-320
3	Tong for 2 kg	1.3YYY-330



Brush



Size	Diameter x Length	Art.no.
1	D10 x L100 mm	1.4YYY-010
2	D20 x L110 mm	1.4YYY-020
3	D30 x L150 mm	1.4YYY-030
4	D30 x L250 mm	1.4YYY-040

Ambient climate recording system



Size	Part of the system	Art.no.
1	Data logger 6 inputs	2.1YYY-010
2	Data logger 9 inputs	2.1YYY-020
3	Data logger 12 inputs	2.1YYY-030
4	PT 100 temperature sensor	2.1YYY-040
5	Humidity sensor	2.1YYY-050
6	Air pressure sensor	2.1YYY-060

Instruments for permeability determination



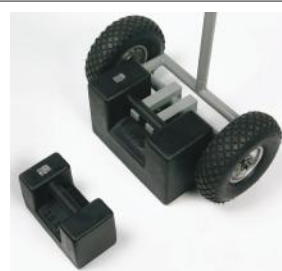
Permeability checking

Size	suitable	Art.no.
1	Permeability checking	2.2YYY-010
2	Permeability measuring Magnetmaster	2.2YYY-020
3	Permeability measuring Permmaster	2.2YYY-030

Permeability measuring
MagnetmasterPermeability measuring
Permmaster

Transport tools for weights

Size	suitable	Art.no.
1	Transport cart	1.3YYY-410
2	Lifting tool	1.3YYY-420



Transport cart



Lifting tool

Materials to protect the adjustment chamber from external influences for weights of class M1-M3

Disc plugs and underlay plates must always be used together.

Disc plugs

Disc plugs made of tin are our standard, as tin has no magnetic properties and therefore does not influence the measurement results. Less expensive disc plugs made of lead are available upon customer request when magnetic properties are not a major concern.

Size	Ø	Thickness	Suitable for / additional information	Type of weight		Material	Art.no.
1	5 mm	1 mm	20 g	Knob weights		Tin	1.7ZVY-010
2	7 mm	1,5 mm	50 g / 100 g	Knob weights		Tin	1.7ZVY-020
3	10 mm	2 mm	200 g / 500 g	Knob weights		Tin	1.7ZVY-030
4	16 mm	2 mm	Special size	Knob weights		Tin	1.7ZVY-040
5	18 mm	3 mm	1 kg / 2 kg	Knob weights		Tin	1.7ZVY-050
6	20 mm	2 mm	Special size	Knob weights		Tin	1.7ZVY-060
7	22,5 mm	2 mm	Special size	Knob weights		Tin	1.7ZVY-070
8	24 mm	3 mm	5 kg / 10 kg	Knob weights		Tin	1.7ZVY-080
1	5 mm	1 mm	20 g	Knob weights		Lead	1.7PVY-010
2	7 mm	1,5 mm	50 g / 100 g	Knob weights		Lead	1.7PVY-020
3	10 mm	2 mm	200 g / 500 g	Knob weights		Lead	1.7PVY-030
4	16 mm	2 mm	Special size	Knob weights		Lead	1.7PVY-040
5	18 mm	3 mm	1 kg / 2 kg	Knob weights		Lead	1.7PVY-050
6	24 mm	3 mm	5 kg / 10 kg	Knob weights		Lead	1.7PVY-080
7	30 mm	4,5 mm	100 kg / 200 kg / 500 kg / 1.000 kg / 2.000 kg	Block weights made of cast iron		Lead	1.7PVY-090
8	-	-	5 kg / 10 kg / 20 kg / 50 kg	Block weights made of cast iron*		Lead	1.7PVY-100

* Length x width x thickness: 28mm x 21mm x 4mm

Underlay plates

Underlay plates made of brass or steel are used as a backing for the disc plugs.

Size	Ø	Thickness	Suitable for / additional information	Type of weight		Material	Art.no.
1	5 mm	1 mm	20 g	Knob weights		Brass	1.7MUY-010
2	7 mm	2 mm	50 g / 100 g	Knob weights		Brass	1.7MUY-020
3	10 mm	2 mm	200 g / 500 g	Knob weights		Brass	1.7MUY-030
4	16 mm	2 mm	Special size	Knob weights		Brass	1.7MUY-040
5	18 mm	3,5 mm	1 kg / 2 kg	Knob weights		Brass	1.7MUY-050
6	20 mm	3 mm	Special size	Knob weights		Brass	1.7MUY-060
7	22,5 mm	2 mm	Special size	Knob weights		Brass	1.7MUY-070
8	24 mm	3 mm	5 kg / 10 kg	Knob weights		Brass	1.7MUY-080
9	30 mm	3 mm	Special size	Knob weights		Brass	1.7MUY-090
10	-	-	5 kg / 10 kg / 20 kg / 50 kg	Block weights made of cast iron*		Steel	1.7MUY-100

* Length x width x thickness: 28mm x 21mm x 5mm

Sealing plugs DIN 1924

Sealing plugs made of lead are suitable for gray cast iron button and slot weights.

Size	Ø	Thickness	Suitable for / additional information	Type of weight		Material	Art.no.
1	24 mm	23 mm	Special size	Slotted weights		Lead	1.7PPY-010
2	23 mm	22 mm	20 kg / 50 kg	Slotted weights		Lead	1.7PPY-020
3	22 mm	21 mm	20 kg / 50 kg	Slotted weights		Lead	1.7PPY-030
4	21 mm	20 mm	10 kg	Slotted weights		Lead	1.7PPY-040
5	20 mm	19 mm	10 kg	Slotted weights		Lead	1.7PPY-050
6	19 mm	19 mm	10 kg	Slotted weights		Lead	1.7PPY-060
7	18 mm	18 mm	5 kg	Slotted weights		Lead	1.7PPY-070
8	17 mm	17 mm	20 kg (knob w.), 5 kg (slotted w.)	Knob weights / slotted weights		Lead	1.7PPY-080
9	16 mm	16 mm	5 kg (knob w.), 2 kg (slotted w.)	Knob weights / slotted weights		Lead	1.7PPY-090
10	15 mm	15 mm	10 kg	Knob weights		Lead	1.7PPY-100
11	14 mm	14 mm	10 kg	Knob weights		Lead	1.7PPY-110
12	13 mm	13 mm	10 kg	Knob weights		Lead	1.7PPY-120
13	12 mm	12,5 mm	500 g / 1 kg (knob w.), 500 g / 1 kg (slotted w.)	Knob weights / slotted weights		Lead	1.7PPY-130
14	11 mm	12 mm	500 g / 1 kg (knob), 500 g / 1 kg (slotted weights)	Knob weights / slotted weights		Lead	1.7PPY-140
15	10 mm	10,5 mm	Special size	Knob weights		Lead	1.7PPY-150
16	9 mm	10 mm	Special size	Knob weights		Lead	1.7PPY-160
17	8 mm	9 mm	Special size	Knob weights		Lead	1.7PPY-170

Adjustment granules

Adjustment granules are used as filling material when adjusting weights of classes F1, F2 and M1-M3.

Size	Ø	Material	Art.no.
1	2 mm	Lead	1.7PGY-010
2	3 mm	Lead	1.7PGY-020
3	6 mm	Lead	1.7PGY-030
1	1 mm	Stainless steel	1.7EGY-010
2	2 mm	Stainless steel	1.7EGY-020
1	1 mm	Tin	1.7ZGY-010



Recalibration

Recalibration including checking of magnetism

E0 PTB-test or calibration*

*Certification of the conventional weighing value and the mass, if the values of the determination of the volume/density are available.

E1 PTB-test or calibration*

*Certification of the conventional weighing value and the mass, if the values of the determination of the volume/density are available.

E1 DAkkS-Calibration certificate

SINGLE WEIGHT

Nominal value	Art.no
1 mg - 500 mg	1325
1 g - 1 kg	1326
2 kg - 10 kg	1327
20 kg	1328
50 kg	1329

The examination of the magnetic properties according OMIL R 111-2004 is included in these prices.

SETS

Nominal value	Art.no	Nominal value	Art.no
1 g - 50 g	1384	1 mg - 500 mg	1392
1 g - 100 g	1385	1 mg - 50 g	1393
1 g - 200 g	1386	1 mg - 100 g	1394
1 g - 500 g	1387	1 mg - 200 g	1395
1 g - 1 kg	1388	1 mg - 500 g	1396
1 g - 2 kg	1389	1 mg - 1 kg	1397
1 g - 5 kg	1390	1 mg - 2 kg	1398
1 g - 10 kg	1391	1 mg - 5 kg	1399
		1 mg - 10 kg	1400

E2 DAkkS-Calibration certificate

SINGLE WEIGHT

Nominal value	Art.no
1 mg - 2 kg	1320
5 kg - 10 kg	1322
20 kg	1323
50 kg	1324

SETS

Nominal value	Art.no	Nominal value	Art.no
1 g - 50 g	1367	1 mg - 500 mg	1375
1 g - 100 g	1368	1 mg - 50 g	1376
1 g - 200 g	1369	1 mg - 100 g	1377
1 g - 500 g	1370	1 mg - 200 g	1378
1 g - 1 kg	1371	1 mg - 500 g	1379
1 g - 2 kg	1372	1 mg - 1 kg	1380
1 g - 5 kg	1373	1 mg - 2 kg	1381
1 g - 10 kg	1374	1 mg - 5 kg	1382
		1 mg - 10 kg	1383

F1 DAkkS-Calibration certificate**SINGLE WEIGHT**

Nominal value	Art.no.
1 mg - 2 kg	1470-1
5 kg - 10 kg	1311-1
20 kg	1312-1
50 kg	1313-1
100 kg, F1, PTB-Calibration	1461-1
200 kg, F1, PTB- Calibration	1462-1
500 kg, F1, PTB- Calibration	1463-1
1000 kg, F1, PTB- Calibration	1464-1
2000 kg, F1, PTB- Calibration	1465-1

SETS

Nominal value	Art.no.	Nominal value	Art.no.
1 g - 50 g	1350-1	1 mg - 500 mg	1358-1
1 g - 100 g	1351-1	1 mg - 50 g	1359-1
1 g - 200 g	1352-1	1 mg - 100 g	1360-1
1 g - 500 g	1353-1	1 mg - 200 g	1361-1
1 g - 1 kg	1354-1	1 mg - 500 g	1362-1
1 g - 2 kg	1355-1	1 mg - 1 kg	1363-1
1 g - 5 kg	1356-1	1 mg - 2 kg	1364-1
1 g - 10 kg	1357-1	1 mg - 5 kg	1365-1
		1 mg - 10 kg	1366-1

Individual nominal values or intermediate values like newton weights or weights in other units are calculated with an extra charge of **10,00 EUR /piece**. Necessary costs for reparation and adjustment are calculated after prior consultation in a cost estimation.

F2 DAkkS-Calibration certificate**SINGLE WEIGHT**

Nominal value	Art.no.
1 mg - 2 kg	1470
5 kg - 10 kg	1311
20 kg	1312
50 kg	1313
100 kg	1314
200 kg	1315
500 kg	1316
1000 kg	1317

SETS

Nominal value	Art.no.	Nominal value	Art.no.
1 g - 50 g	1350	1 mg - 500 mg	1358
1 g - 100 g	1351	1 mg - 50 g	1359
1 g - 200 g	1352	1 mg - 100 g	1360
1 g - 500 g	1353	1 mg - 200 g	1361
1 g - 1 kg	1354	1 mg - 500 g	1362
1 g - 2 kg	1355	1 mg - 1 kg	1363
1 g - 5 kg	1356	1 mg - 2 kg	1364
1 g - 10 kg	1357	1 mg - 5 kg	1365
		1 mg - 10 kg	1366

Individual nominal values or intermediate values like newton weights or weights in other units are calculated with an extra charge of **10,00 /piece**. Necessary costs for reparation and adjustment are calculated after prior consultation in a cost estimation.

M1 M2 M3 DAkkS-Calibration certificate**SINGLE WEIGHT**

Nominal value	Art.no.
1 mg - 2 kg	1301
5 kg - 10 kg	1302
20 kg	1304
50 kg	1305
100 kg	1306
200 kg	1307
500 kg	1308
1000 kg	1309
2000 kg	1310

SETS

Nominal value	Art.no.	Nominal value	Art.no.
1 g - 50 g	1333	1 mg - 500 mg	1341
1 g - 100 g	1334	1 mg - 50 g	1342
1 g - 200 g	1335	1 mg - 100 g	1343
1 g - 500 g	1336	1 mg - 200 g	1344
1 g - 1 kg	1337	1 mg - 500 g	1345
1 g - 2 kg	1338	1 mg - 1 kg	1346
1 g - 5 kg	1339	1 mg - 2 kg	1347
1 g - 10 kg	1340	1 mg - 5 kg	1348
		1 mg - 10 kg	1349

Individual nominal values or intermediate values like newton weights or weights in other units are calculated with an extra charge of **10,00 EUR /piece**. Necessary costs for reparation and adjustment are calculated after prior consultation in a cost estimation.

Lettering and engraving

Foil stamping, engraving and special labels

Style	Description	Using for	Art. no.
Type 1	3 or 5-digit character string, as an impression with engraving stamp	Alphanumeric characters, suitable for lead, brass and stainless steel	2001
Type 2	3- or 5-digit character string, as a CNC engraving	Alphanumeric characters, suitable for grey cast iron, brass and stainless steel	2002
Type 3	Special engravings	Logos and customised letting (e.g. barcodes)	2003
Type 4	Special labels for containers (wooden boxes, synthetic case, service case for weights)	Lettering with customised text, logos and barcodes on silver-coloured labels (Easy label software)	2004

Engravings and impressions on weights. Therefore, they should be carried out before any adjustment or calibration

Special laser inscriptions (special occasion inscriptions that are easy on materials)

Style	Description	Using for	Art. no.
Type 1	1- or 2-digit	Alphanumeric character string for leaf weights 1 mg – 5 mg	2010
Type 2	3- or 5-digit	Alphanumeric character string for all defined weights and units of weight 1 g – 500 kg (stainless steel, brass etc.)	2012
Type 3	Special user characters	Customer-specific content, e.g. serial number, bar codes (line and data matrix) etc.	2013
Type 4	Logos	Customer logos (prepared in jpeg, tiff, gif or pdf formats)	2014

The material structure of the pieces of mass and defined weights is not magnetised. The ability to polish and corn size are maintained to the full extent. Material removal is virtually negligible depending on the font size and the number of characters.



SimplyCal®
BALANCE CALIBRATION

**PERFECTLY
CALIBRATED**

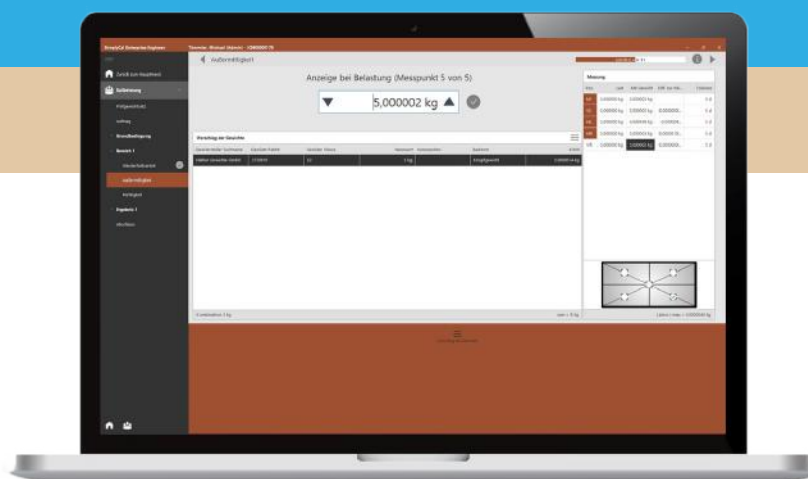
WHAT IS SimplyCal?

SimplyCal is software for Windows operating computers that assists users in testing and calibrating nonautomatic balances and guides through individually adjustable test methods. SimplyCal differentiates between single-range, multi-range and multi-interval scales. Based on master data SimplyCal analyses entered measurement results and calculates the measurement uncertainty of the balance according to EURAMET/cg-18.

Finally the user generates a calibration certificates or a DAkkS-certificate (in case the calibration laboratory is accredited by Deutsche Akkreditierungsstelle). The calibration validity of test mediums is constantly monitored. The software is optimally suitable for accredited calibration laboratories. SimplyCal can be used as single-user system (computer /notebook) or as multi-user system with a central database (SQL server database).

WHY SimplyCal?

- balance calibration compliant to EURAMET/cg-18
- user-friendly and practice-oriented developed from calibration specialists for calibration specialists
- individualization through adaptable program parameters
- interface to all common ERP systems
- programming, service and technical support through professional software house



Certified to
DIN EN ISO 9001:2015



Accredited to
DIN EN ISO/IEC 17025:2018



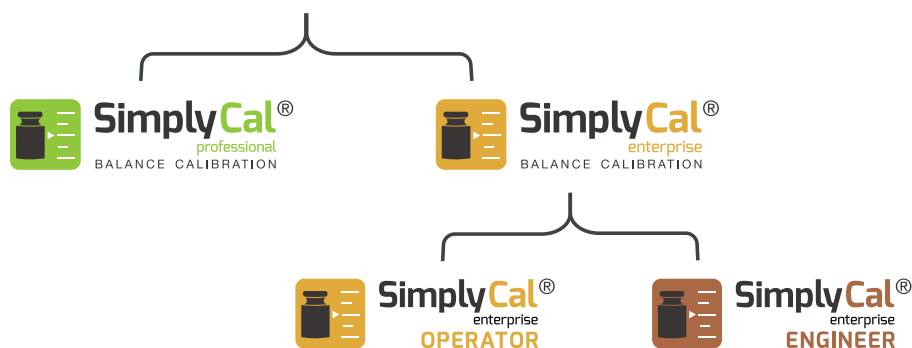
Mitglied im
Deutscher
Kalibrierdienst



HOW DOES SimplyCal WORK?

- management of master data (incl. customers, balance producer, test weights, climate measurement tools and much more)
- six test methods for different types of balances (several minimum and maximum methods)
- testing of repeatability, eccentricity and accuracy
- calculation of minimum sample weight
- calculation of results (statistics and graphs)
- generation of calibration certificate and DAkkS certificate
- monitoring of measuring instruments (test weights and climate measurement instruments)
- quick access functions synchronization of Hafner calibration data for test weights

SOFTWARE FOR CALIBRATING BALANCES FOR PRACTITIONERS



- | | |
|--------------------------------|---|
| ■ single-user system | ■ multi-user system |
| ■ full function range | ■ central database in server version |
| ■ suitable for single auditors | ■ mobile data exchange through VPN connection |





THE INTERNATIONAL CERTIFICATION NETWORK

CERTIFICATE

DQS Holding has issued an IQNet recognized certificate that the organization:

*Häfner Gewichte GmbH
Hohenhardtsweiler Straße 4
DE-74420 Oberrot Germany*

has implemented and maintains a

Quality Management System

for the following scope:

Design; manufacturing; adjustment; factory-calibration and sales of weights; mass standards; load bodies and set of weights of all accuracy classes and nominal values including accessories; Production and first sampling of precision parts

which fulfils the requirements of the following standard:

ISO 9001:2015

Issued on: 2022-04-14

Expires on: 2025-04-13

This attestation is directly linked to the IQNet Partner's original certificate and shall not be used as a stand-alone document

Registration Number DE-065399 QM15

*Alex Stoichitoui
President of IQNet*

*Pedro Alves
Managing Director of IQNet*

IQNet Partners*:

AENOR Spain AFNOR Certification France APCER Portugal CCC Cyprus CISQ Italy
CQC China CQM China CQS Czech Republic Cro Cert Croatia DQS Holding GmbH Germany EAGLE Certification Group USA
FCAV Brazil FONDONORMA Venezuela ICONTEC Colombia Inspecta Sertifointi Oy Finland INTECO Costa Rica
IRAM Argentina JQA Japan KFQ Korea MIRTEC Greece MSZT Hungary Nemko AS Norway NSAI Ireland
NYCE-SIGE México PCBC Poland Quality Austria Austria RR Russia SII Israel SIQ Slovenia
SIRIM QAS International Malaysia SQS Switzerland SRAC Romania TEST St Petersburg Russia TSE Turkey YUQS Serbia

* The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com



CERTIFICATE



This is to certify that



HÄFNER®

THE PERFECT WEIGHT

Häfner Gewichte GmbH

Hohenhardtsweiler Straße 4
74420 Oberrot
Germany

with the organizational units/sites as listed in the annex

has implemented and maintains a **Quality Management System**.

Scope:
Design; manufacturing; adjustment; factory-calibration and sales of weights; mass standards;
load bodies and set of weights of all accuracy classes and nominal values including
accessories; Production and first sampling of precision parts

Through an audit, documented in a report, it was verified that the management system
fulfills the requirements of the following standard:

ISO 9001 : 2015

Certificate registration no.	065399 QM15
Valid from	2022-04-14
Valid until	2025-04-13
Date of certification	2022-03-25




DQS GmbH



Markus Bleher
Managing Director

DQS is member of



Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany

1 / 2



Deutsche Akkreditierungsstelle GmbH

Entrusted according to Section 8 subsection 1 AkkStelleG in connection with Section 1 subsection 1 AkkStelleGBV
Signatory to the Multilateral Agreements of EA, ILAC and IAF for Mutual Recognition

Accreditation



The Deutsche Akkreditierungsstelle GmbH attests that the calibration laboratory

Häfner Gewichte GmbH
MASSCAL - Kalibrierlaboratorium
Rottalstraße 95, 74420 Oberrot, Germany

is competent under the terms of DIN EN ISO/IEC 17025:2018 to carry out calibrations in the following fields:

Mechanical quantities
- Mass (mass standards) *)
- Volume of solids
- Density of solids

*) also on-site calibration

The accreditation certificate shall only apply in connection with the notice of accreditation of 25.05.2020 with the accreditation number D-K-15192-01. It comprises the cover sheet, the reverse side of the cover sheet and the following annex with a total of 5 pages.

Registration number of the certificate: **D-K-15192-01-00**

Berlin,
25.05.2020

Dr. Heike Manke
Head of Division

Translation issued:
25.05.2020

Dr. Heike Manke
Head of Division

*The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.
<https://www.dakks.de/en/content/accredited-bodies-dakks>*

This document is a translation. The definitive version is the original German accreditation certificate.
See notes overleaf.



STAY IN TOUCH WITH US

Executive Board

Martin Häfner	Tel.: +49 7977/9701 52	martin.haefner@haefner.de
Katrin Häfner	Tel.: +49 7977/9701 51	katrin.haefner@haefner.de

Deputy General Management

Evren Turan	Tel.: +49 7977/9701 59	evren.turan@haefner.de
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Sales & Marketing

Evren Turan	Tel.: +49 7977/9701 59	evren.turan@haefner.de
-------------	------------------------	--

MASSCAL – Calibration Laboratory

Ulrich Rost	Tel.: +49 7977/9701 17	ulrich.rost@haefner.de
-------------	------------------------	--

Sales

Katrin Häfner	Tel.: +49 7977/9701 51	katrin.haefner@haefner.de
Andrea Veil	Tel.: +49 7977/9701 10	andrea.veil@haefner.de
Juliane Held	Tel.: +49 7977/9701 54	juliane.held@haefner.de

Purchasing

Jörg Eschenhagen	Tel.: +49 7977/9701 56	joerg.eschenhagen@haefner.de
Marian Quitsch	Tel.: +49 7977/9701 55	marian.quitsch@haefner.de

Accounting

Juliane Held	Tel.: +49 7977/9701 54	juliane.held@haefner.de
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Financial Reporting

Marian Quitsch	Tel.: +49 7977/9701 55	marian.quitsch@haefner.de
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HÄFNER GEWICHTE GMBH

Hohenhardtsweiler Str. 4

74420 Oberrot

Germany

Phone: +49 (0) 7977-9701-0

Fax: +49 (0) 7977-9701-99

info@haefner.de | www.haefner.de



The general delivery and payment conditions are available in the terms and conditions at

<http://www.haefner.de/haefner/agbs.html>

Or by scanning the QR code.