EN

KERN®

PROFESSIONAL MEASURING

TEST WEIGHTS 23

KERN Pictograms

Internal adjusting:
Quick setting up of the balance's accuracy with internal adjusting weight (motordriven)

Adjusting program CAL:
For quick setting up of the balance's accuracy. External adjusting weight required

Easy Touch:
Suitable for the connection, data transmission and control through PC or tablet.

Memory:
Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.

Alibi memory:
Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard.

KERN Universal Port (KUP):
allows the connection of external KUP interface adapters, e.g. RS-232, RS-485, SB, Bluetooth, WLAN, Analogue, Ethernet etc. for the exchange of data and control commands, without installation effort

Data interface RS-232:
To connect the balance to a printer, PC or network

RS-485 data interface:
To connect the balance to a printer, PC or other peripherals. Suitable for data transfer over large distances. Network in bus topology is possible

USB data interface:
To connect the balance to a printer, PC or other peripherals

Bluetooth* data interface:
To transfer data from the balance to a printer, PC or other peripherals

WiFi data interface:
To transfer data from the balance to a printer, PC or other peripherals

Control outputs (optocoupler, digital I/O):
To connect relays, signal lamps, valves, etc.

Analogue interface:
to connect a suitable peripheral device for analogue processing of the measurements

Interface for second balance:
For direct connection of a second balance

Network interface:
For connecting the scale to an Ethernet network

KERN Communication Protocol (KCP):
It is a standardized interface command set for KERN balances and other instruments, which allows retrieving and controlling all relevant parameters and functions of the device. KERN devices featuring KCP are thus easily integrated with computers, industrial controllers and other digital systems

GLP/ISO log:
The balance displays weight, date and time, independent of a printer connection

GLP/ISO log:
With weight, date and time. Only with KERN printers.

Piece counting:
Reference quantities selectable. Display can be switched from piece to weight

Recipe level A:
The weights of the recipe ingredients can be added together and the total weight of the recipe can be printed out

Recipe level B:
Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display

Totalising level A:
The weights of similar items can be added together and the total can be printed out

Percentage determination:
Determining the deviation in % from the target value (100 %)

Weighing units:
Can be switched to e.g. nonmetric units. See balance model. Please refer to KERN's website for more details

Weighing with tolerance range:
(Checkweighing) Upper and lower limiting can be programmed individually, e.g. for sorting and dosing. The process is supported by an audible or visual signal, see the relevant model

Hold function:
(Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average value

Protection against dust and water splashes IPxx:
The type of protection is shown in the pictogram.

Suspended weighing:
Load support with hook on the underside of the balance

Battery operation:
Ready for battery operation. The battery type is specified for each device

Rechargeable battery pack:
Rechargeable set

Universal plug-in power supply:
with universal input and optional input socket adapters for
A) EU, CH, GB
B) EU, CH, GB, USA
C) EU, CH, GB, USA, AUS

Plug-in power supply:
230V/50Hz in standard version for EU, CH. On request GB, USA or AUS version available

Integrated power supply unit:
Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, USA or AUS on request

Weighing principle: Strain gauges
Electrical resistor on an elastic deforming body

Weighing principle: Tuning fork
A resonating body is electromagnetically excited, causing it to oscillate

Weighing principle: Electromagnetic force compensation
Coil inside a permanent magnet. For the most accurate weighings

Weighing principle: Single cell technology:
Advanced version of the force compensation principle with the highest level of precision

Verification possible:
The time required for verification is specified in the pictogram

DAkkS calibration possible (DKD):
The time required for DAkkS calibration is shown in days in the pictogram

Factory calibration (ISO):
The time required for Factory calibration is shown in days in the pictogram

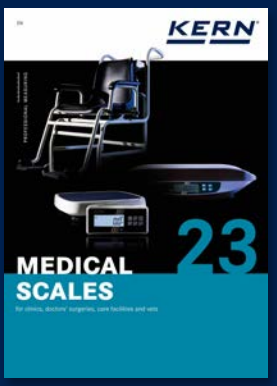
Package shipment:
The time required for internal shipping preparations is shown in days in the pictogram

Pallet shipment:
The time required for internal shipping preparations is shown in days in the pictogram

KERN – Measuring technology and testing services from a single source

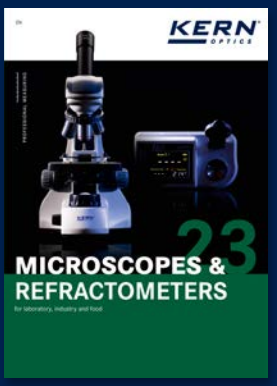
Balances & Test service catalogue

Provides a complete overview of the KERN line of balances, test weights, and services such as verification, calibration, etc.



Medical scales catalogue

Complete line of medical scales, from infant scales to patient scales, chair scales and adiposity scales, as well as hand grip dynamometers, chemist's balances and veterinary scales.



Microscopes & refractometers catalogue

Extensive range in the area of optical instruments, such as, biological microscopes, stereo microscopes, metallurgical microscopes, polarisation microscopes as well as analogue and digital refractometers.

SAUTER measuring equipment catalogue

Test instruments for industry and commerce, such as force, coating thickness, material thickness and calibration service.

Test service brochure

Detailed information on topics pertaining to the calibration and verification of balances, test weights, and force measuring devices.

Your advantages

fast

- 24 hours delivery service for products in stock – ordered today, on its way tomorrow
- Sales & service hotline available from 8:00 am to 6:00 pm

reliable

- Up to 3 years warranty
- Precision in weighing technology for more than 175 years

competent

- DAkkS accreditation DIN EN ISO/IEC 17025
- Certified QM system DIN EN ISO 9001
- Authorisation for initial verification by the manufacturer 2014/31/EU
- Medical certifications DIN EN ISO 13485 and 93/42/EWG

versatile

- One-stop shopping: from pocket balances through to 12 t crane balance – everything from one supplier
- Find the product you want at lightning speed with the "Balance Quick-Finder" at www.kern-sohn.com

Order hotline
+49 7433 9933-0

Service hotline
+49 7433 9933-199

Calibration hotline
+49 7433 9933-196

Online Shop
www.kern-sohn.com

E-mail order
info@kern-sohn.com

Our team of consultants will assist you
from Monday to Friday
from 8:00 am to 5:00 pm

www.kern-sohn.com
Information on current product availability, product data sheets, user instructions, useful knowledge, technical glossary, images and much for you to download, practical topic areas, which will guide you to the right product in your industry as well as a clever test weight and balance search engine.

17 TEST WEIGHTS

Weights yesterday and today

For centuries now, weight pieces have been used in scales for weighing procedures. This original purpose has now almost disappeared. Today, weights are used almost exclusively for adjusting and testing = calibration of electronic balances. They are now named “test weights” as this is their contemporary purpose.

Adjustment or calibration?

▸ ***Adjusting*** a balance means that you are intervening in the weighing system, to make sure that the display is set to show the correct nominal value. With ▸ ***calibration*** on the other hand, there is no intervention, you are testing whether the display is correct and documenting any deviation.

Testing, the right way!

The internationally valid OIML norm R111:2004 classifies test weights hierarchically in accuracy classes, where E1 is the most accurate and M3 is the least accurate weight class. With KERN you get the whole test weight range in all OIML accuracy classes E1, E2, F1, F2, M1, M2, M3.

As the test weight only becomes an ▸ ***ISO 9000ff***-compliant test instrument when its accuracy has been proven, we offer the appropriate ▸ ***DAkkS Calibration certificate*** or verification certificate (in connection with a box) for all KERN test weights. For further details see chapter *DAkkS Calibration Service*.

KERN offers you the appropriate test weight package for your balance, consisting of the test weight, box and DAkkS-calibration certificate, as proof of its accuracy. The best prerequisite for a correct adjustment or checking of your scales.

▸ ***See the glossary on page 223–225***

Classes of accuracy of test weights E, F, M and their general relation to the types of balances:

E1 Test weights for customers who require a high degree of accuracy for the most demanding applications. For high-resolution balances with d > 1,000,000 Use recommended with DAkkS calibration certificate only.

E2 Most accurate test weights for high resolution analytical balances of verification class I ≥ 100,000 e

F1 Test weights for analytical balances/precision balances for verification class I/II ≤ 100,000 e

F2 Test weights for precision balances of verification class II ≤ 30,000 e

M1 Test weights for industrial and commercial scales of verification class III ≤ 10,000 e

The appropriate test weight for your new KERN balance can also be found directly in the accessories of the balance in our webshop.

KERN DAkkS delivery times & shipping type	Total weight ≤ 30 kg (gross weight, incl. packaging)	Total weight > 30 kg (gross weight, incl. packaging)
DAkkS standard service Class E2 – M3	4 DAYS	4 DAYS
DAkkS standard service Class E1, 1 mg – 500 mg and recalibration 1 g – 10 kg with a known volume	10 DAYS	10 DAYS
ClassE1, ≥ 1 g, incl. volume determination (new weights)	15 DAYS	15 DAYS
Special weights, Newton weights, heavy duty weights, weight carriers, containers for individual weight sets etc.	on request	

Just lean back – we have just the right test weight for your measuring device

KERN offers you a large range of OIML test weights, which you can use at any time to quickly and reliably check your balance, force-measuring device, etc.. From milligram weights to tonne weights, from the classic OIML design to special weights which are specifically manufactured to your specifications, we can offer you just the right test weight, and naturally the weights have the relevant DAkkS calibration certificate or factory calibration certificate.

On the following pages you will see a selection of standard test weights for OIML error limit classes E1, E2, F1, F2, M1, M2, M3.

We will be happy to manufacture special (large) weights, weight containers, Newton weights or weights with special weight values for you on request. Our test weights product specialist will be happy to give you expert, comprehensive advice.

Note: In our webshop you can conveniently select test weights for your scale that have been calculated and matched to your accuracy requirements and intended use – with or without calibration. We will be happy to determine the minimum sample quantity according to USP Chapter <41> and recommend a KERN Safety Set especially designed for your scale.

PREMIUM^{+} TEST WEIGHTS

Note: Our highly-accurate OIML test weights are also available as **PREMIUM^{+} test weights** for that extra level of safety. Thanks to the most modern manufucturing technology, these test weights can also be adjusted within the specified error limit classes (= tolerances).

I.e. this means that these **PREMIUM^{+} test weights** have a significantly longer service life, thanks this guaranteed positive tolerance. This is of particular benefit with intensive use of the test weights.

For all the details on this **PREMIUM^{+} service** please see **www.kern-lab.com/premium+** or look at the weight you want in our online shop at www.kern-sohn.com

Marking – never lose track again!

With the large variety of test equipment used then it is essential that they are identified accurately. We can help you with this and mark your test weights according to your ideas by etching or with impact numbers. Whether it's letters, numbers, your logo, barcodes or something else – it's your choice. Our product specialist "Test weights" will gladly help you with any questions about this service, prices, etc.

KERN **SAFETY SETS**

All the security you need!

“**KERN Safety Sets**” which have been specially developed, put together and contain the right test weights to test and monitor your balance. They each consist of a test weight for checking the sensitivity, i.e. the correct adjustment of your scale, and a small test weight for checking at the lower end of the weighing range, the so-called minimum sample weight. As an option, the “KERN Safety Set” has space for another test weight, for testing your balance at a weight which is relevant for you.

Useful accessories which have been selected to suit that particular “KERN Safety Set”, such as, for example, special gloves, tweezers, weight grips, brushes, etc., will assist you in handling your test weights properly. Stored in the practical protective case next to your balance, you can check and ensure the high precision of your balance at any time.

Just ask our test weight product specialist, they will be happy to recommend the right “KERN Safety Set” for your balance. You can also find the matching “KERN Safety Set” for each model on the Internet at www.kern-sohn.com

Product Specialist Test Weights

Taras Mikitisin
Tel. +49 7433 9933-143
mikitisin@kern-sohn.com

Our KERN weight cases at a glance:

Plastic box
for individual weights

Aluminium protected box
for individual weights

Wooden box, lined / unlined
for individual weights

Plastic case
for weight sets

Aluminium protected case for weight sets

Wooden case, lined / unlined
for weight sets

It's your choice!
To protect your test weights we can offer you an appropriate weight case. If there are no legal or normative specifications, then you have the choice between plastic, aluminium protected or wood. The available weight cases are shown as a symbol in the test weight tables on the following pages. This way you have all the materials, versions, sizes and prices at a glance, listed in a concise way.

It's so easy to order your suitable test weight

1 → **2** → **3** → **4**

According to your safety requirements or the specifications of your QM system, you select the test weight with the appropriate weight value and the required tolerance (see page 186/187).

We offer many test weights in different designs, giving you complete freedom to decide which test weights you want to use for your application. It goes without saying that all our test weights comply with the OIML R111:2004 directive.

To protect your high-quality test equipment, we offer you cases in various designs. From low-priced plastic weight cases to aluminium protected weight cases to classic, high-quality wooden weight cases.

A DAkkS calibration certificate – the auditor's favourite! With this certificate you provide the standard-compliant proof of all important values of your test equipment and are on the safe side when operating and testing your measuring equipment.

1		2		2		3		3		3		4	
Weight	Tol +/- mg	Individual weights, compact shape		Individual weights, knob shape		Plastic box		Aluminium protected box		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 g	0,03	316-01	36,-	317-01	52,-	317-020-400	4,-	317-010-600	14,-	317-010-100	26,-	962-331	30,-
2 g	0,04	316-02	36,-	317-02	53,-	317-020-400	4,-	317-020-600	14,-	317-020-100	26,-	962-332	30,-
5 g	0,05	316-03	37,-	317-03	56,-	317-030-400	4,-	317-030-600	14,-	317-030-100	26,-	962-333	30,-
10 g	0,06	316-04	38,-	317-04	60,-	317-040-400	4,-	317-040-600					30,-
20 g	0,08	316-05	43,-	317-05	68,-	317-050-400							
		316-06	46,-	317-06	73,-								

1	2	3	3	3	4	
Weight	Knob shape in plastic case		Knob shape in aluminium protected case		Knob shape in wooden case		DAkkS certificate	
	KERN	€	KERN	€	KERN	€	KERN	€
1 mg - 500 mg	338-22	143,-	338-226	183,-			962-450	110,-
1 mg - 50 g	333-024	345,-	333-026	365,-	333-02	370,-	962-401	184,-
1 mg - 100 g	333-034	385,-	333-036	400,-	333-03	405,-	962-402	196,-
1 mg - 200 g	333-044	450,-	333-046	465,-	333-04	470,-	962-403	220,-
1 mg - 500 g	333-054	510,-	333-056	530,-	333-05	540,-	962-404	230,-
1 mg - 1 kg	333-064	630,-	333-066	650,-				240,-
1 mg - 2 kg	333-074	890,-	333-076					

Selection of the appropriate test weight for your balance

A balance can never be more accurate than the test weight that is used to adjust it, it all depends on its tolerance. **The accuracy of the test weight should correspond to the readout [d] of the balance, or rather be more precise.**

Nominal weight value is shown in adjust mode “CAL” in the balance display. Given a choice, the heaviest weight is the most suitable for accurate measurement.

Once accuracy and nominal weight value are specified, the suitable test weight is selected according to the tolerances “Tol” of the individual accuracy classes E2 – M3, see column “Tol ± mg” at the respective weight and table at page 187.

Example:
Balance with weighing range [Max] 2000 g = 2 kg
and readout [d] = 0,01 g = 10 mg

- The accuracy of the required test weight is determined by readout [d]: max. tolerance ± 10 mg.
- Displayed weight size on “CAL” mode: 1000 g or 2000 g. The required test weight has a 2 kg weight size.
- Suitable test weights with ± 10 mg tolerance and 2 kg weight size, can be found in accuracy class F1. KERN-No 326-12 or KERN-No 327-12, see page 193.

Exception: analytical balances (readout [d] ≤ 0,1 mg):
E1 test weights are recommended. Depending on the safety requirements, E2 test weights with a DAkkS calibration certificate will also be sufficient.

From finely turned to polished stainless steel – the right test weight for every situation





Test weight → / Features ↓	Knob shape with lifting knob, polished stainless steel	Compact shape with carrying grip, polished stainless steel	Knob shape with lifting knob, polished stainless steel	ECO shape, polished stainless steel	Knob shape with lifting knob, finely turned stainless steel
Conforms to OIML:R111	yes	yes	yes	yes	yes
Available classes	E1, E2	E2	F1	F1	F2, M1
Upper surface	polished	polished	polished	polished	finely turned
Material	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Adjusting cavity	no	no	yes	yes, from 50 g, readjustment can only be carried out by KERN	yes, from 20 g
Marking (Milligram weights, generally none)	none	none	Nominal value, etched	Nominal value, etched	F2: Class + nominal value, etched; M1: Class + nominal value, adopted
Verification possible	yes (E2)	yes	yes	no	yes (M1)
Checking equipment for verification purposes	approved (E2)	approved	approved	approved	approved (M1)
Ideal as checking equipment in QM systems (e.g. ISO 9000 ff)	yes	yes	yes	yes	yes
Benefits	• High-quality test weight for analytical and precision balances • Highly-refined surface • Ideal shape of the top for good grip	• Affordable test weight for analytical and precision balances • Highly refined surface	• Ideal, high-quality test weight for precision balances • No visible adjustment chamber • High long-term stability • Ideal shape of the top for good grip	• Affordable test weight for analytical and precision balances • Highly refined surface • Optimum shape of the top for good grip	• Ideal test weight for commercial and industrial scales • Ideal shape of the top for good grip

Composition table, valid for all KERN test weight sets from 1 mg

Individual weights per set → / Test weight set ↓	1 mg	2 mg	2 mg	5 mg	10 mg	20 mg	20 mg	50 mg	100 mg	200 mg	200 mg	500 mg	1 g	2 g	2 g	5 g	10 g	20 g	20 g	50 g	100 g	200 g	200 g	500 g	1 kg	2 kg	2 kg	5 kg	10 kg
1 mg-500 mg	Total weight											1,11 g																	
1 mg-50 g																				111,11 g									
1 mg-100 g																					211,11 g								
1 mg-200 g																						611,11 g							
1 mg-500 g																								1.111,11 g					
1 mg-1 kg																									2.111,11 g				
1 mg-2 kg																											6.111,11 g		
1 mg-5 kg																												11.111,11 g	
1 mg-10 kg																													21.111,11 g

The key points from the OIML norm R111:2004

OIML (Organisation Internationale de Métrologie Légale) has established the exact metrological requirements for weights in verified applications in approx. 100 states all over the world. The OIML recommendation R111 (2004 Edition) for weights relates to sizes 1 mg – 5000 kg. Statements are made on the accuracy, materials, geometric shape, marking and storage of the weights.

Error limits for weights of classes E1 to M3

The error limit classes are in fixed hierarchical levels in the proportion of 1:3, where E1 is the most accurate and M3 is the least accurate weight class. When testing weights with other weights, the correct test class is the next highest class.

Error limit classes (= tolerances)

The values given in the table below (tolerances ± ... mg) are the respective permitted fabrication tolerances. They are to be equal to the ▸ **measuring uncertainty** of the weight, if no ▸ **DAkkS calibration certificate** is available.

Conventional mass

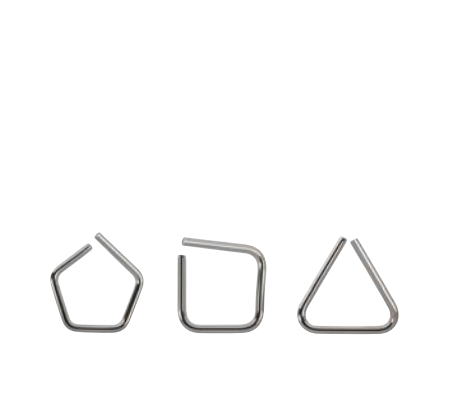
The problem is the air buoyancy, which makes the weight appear lighter. In order to avoid this "distortion" in daily use, all weights are adjusted to the unit specifications as given in R111, e.g. it is accepted that: material density of the weights is 8000 kg/m^3, air density is 1.2 kg/m^3 and measuring temperature is 20 °C.

KERN test weights: Unless otherwise specified, they conform to OIML R111:2004 in every detail.

▸ ***See the glossary, page 223–225***

Nominal value	OIML R111:2004 Maximum permissible errors for weights = permissible tolerances "Tol ± mg"						
↓	E1	E2	F1	F2	M1	M2	M3
1 mg	± 0,003 mg	± 0,006 mg	± 0,020 mg	± 0,06 mg	± 0,20 mg	-	-
2 mg	± 0,003 mg	± 0,006 mg	± 0,020 mg	± 0,06 mg	± 0,20 mg	-	-
5 mg	± 0,003 mg	± 0,006 mg	± 0,020 mg	± 0,06 mg	± 0,20 mg	-	-
10 mg	± 0,003 mg	± 0,008 mg	± 0,025 mg	± 0,08 mg	± 0,25 mg	-	-
20 mg	± 0,003 mg	± 0,010 mg	± 0,03 mg	± 0,10 mg	± 0,3 mg	-	-
50 mg	± 0,004 mg	± 0,012 mg	± 0,04 mg	± 0,12 mg	± 0,4 mg	-	-
100 mg	± 0,005 mg	± 0,016 mg	± 0,05 mg	± 0,16 mg	± 0,5 mg	± 1,6 mg	-
200 mg	± 0,006 mg	± 0,020 mg	± 0,06 mg	± 0,20 mg	± 0,6 mg	± 2,0 mg	-
500 mg	± 0,008 mg	± 0,025 mg	± 0,08 mg	± 0,25 mg	± 0,8 mg	± 2,5 mg	-
1 g	± 0,010 mg	± 0,03 mg	± 0,10 mg	± 0,3 mg	± 1,0 mg	± 3,0 mg	± 10 mg
2 g	± 0,012 mg	± 0,04 mg	± 0,12 mg	± 0,4 mg	± 1,2 mg	± 4,0 mg	± 12 mg
5 g	± 0,016 mg	± 0,05 mg	± 0,16 mg	± 0,5 mg	± 1,6 mg	± 5,0 mg	± 16 mg
10 g	± 0,020 mg	± 0,06 mg	± 0,20 mg	± 0,6 mg	± 2,0 mg	± 6,0 mg	± 20 mg
20 g	± 0,025 mg	± 0,08 mg	± 0,25 mg	± 0,8 mg	± 2,5 mg	± 8,0 mg	± 25 mg
50 g	± 0,03 mg	± 0,10 mg	± 0,3 mg	± 1,0 mg	± 3,0 mg	± 10 mg	± 30 mg
100 g	± 0,05 mg	± 0,16 mg	± 0,5 mg	± 1,6 mg	± 5,0 mg	± 16 mg	± 50 mg
200 g	± 0,10 mg	± 0,3 mg	± 1,0 mg	± 3,0 mg	± 10 mg	± 30 mg	± 100 mg
500 g	± 0,25 mg	± 0,8 mg	± 2,5 mg	± 8,0 mg	± 25 mg	± 80 mg	± 250 mg
1 kg	± 0,5 mg	± 1,6 mg	± 5,0 mg	± 16 mg	± 50 mg	± 160 mg	± 500 mg
2 kg	± 1,0 mg	± 3,0 mg	± 10 mg	± 30 mg	± 100 mg	± 300 mg	± 1 000 mg
5 kg	± 2,5 mg	± 8,0 mg	± 25 mg	± 80 mg	± 250 mg	± 800 mg	± 2 500 mg
10 kg	± 5,0 mg	± 16 mg	± 50 mg	± 160 mg	± 500 mg	± 1 600 mg	± 5 000 mg
20 kg	± 10 mg	± 30 mg	± 100 mg	± 300 mg	± 1 000 mg	± 3 000 mg	± 10 g
50 kg	± 25 mg	± 80 mg	± 250 mg	± 800 mg	± 2 500 mg	± 8 000 mg	± 25 g
100 kg	-	± 160 mg	± 500 mg	± 1 600 mg	± 5 000 mg	± 16 g	± 50 g
200 kg	-	± 300 mg	± 1 000 mg	± 3 000 mg	± 10 g	± 30 g	± 100 g
500 kg	-	± 800 mg	± 2 500 mg	± 8 000 mg	± 25 g	± 80 g	± 250 g
1 000 kg	-	± 1 600 mg	± 5 000 mg	± 16 g	± 50 g	± 160 g	± 500 g
2 000 kg	-	-	± 10 g	± 30 g	± 100 g	± 300 g	± 1 000 g
5 000 kg	-	-	± 25 g	± 80 g	± 250 g	± 800 g	± 2 500 g

Test weights and boxes
Class E1



Milligram weights, wire shape

Individual weights, knob shape

Wooden box, for milligram weights

Plastic box, lined, for individual weights ≤ 50 g

Plastic box, lined, for individual weights ≥ 100 g

Wooden box, lined, for individual weights ≤ 500 g

Wooden box, lined, for individual weights ≥ 1 kg

Milligram weight set in plastic box (308-42)

Milligram weight set in aluminium protected box, lined (308-426)

Plastic case, lined, for weight sets, compact shape/ knob shape

Aluminium protected case, lined, for weight sets, knob shape

Wooden case, lined, for weight sets, knob shape

Class E1 · Milligram weights, wire shape

Test weight material: stainless steel

Weight	Tol +/- mg	Milligram weight, wire shape		Plastic box		Aluminium protected box		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 mg	0,003	308-31	**89,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-251	**64,-**
2 mg	0,003	308-32	**89,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-252	**64,-**
5 mg	0,003	308-33	**89,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-253	**64,-**
10 mg	0,003	308-34	**89,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-254	**64,-**
20 mg	0,003	308-35	**89,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-255	**64,-**
50 mg	0,004	308-36	**89,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-256	**64,-**
100 mg	0,005	308-37	**89,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-257	**64,-**
200 mg	0,006	308-38	**89,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-258	**64,-**
500 mg	0,008	308-39	**89,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-259	**64,-**

Class E1 · Individual weights, knob shape

Test weight material: stainless steel polished

Weight	Tol +/- mg	Individual weight, knob shape		Plastic box		Aluminium protected box		Wooden box		DAkkS certificate Initial calibration*		DAkkS certificate Recalibration	
		KERN	€	KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 g	0,010	307-01	**101,-**	317-020-400	**4,80**	317-010-600	**15,-**	317-010-100	**26,-**	963-231	**235,-**	962-231 R	**72,-**
2 g	0,012	307-02	**110,-**	317-020-400	**4,80**	317-020-600	**18,-**	317-020-100	**27,-**	963-232	**235,-**	962-232 R	**72,-**
5 g	0,016	307-03	**113,-**	317-030-400	**4,80**	317-030-600	**16,-**	317-030-100	**28,-**	963-233	**235,-**	962-233 R	**72,-**
10 g	0,020	307-04	**122,-**	317-040-400	**4,80**	317-040-600	**16,-**	317-040-100	**27,-**	963-234	**235,-**	962-234 R	**72,-**
20 g	0,025	307-05	**129,-**	317-050-400	**4,80**	317-050-600	**16,-**	317-050-100	**31,-**	963-335	**210,-**	962-235 R	**72,-**
50 g	0,030	307-06	**153,-**	317-060-400	**6,-**	317-060-600	**15,-**	317-060-100	**31,-**	963-236	**235,-**	962-236 R	**72,-**
100 g	0,050	307-07	**192,-**	317-070-400	**8,-**	317-070-600	**15,-**	317-070-100	**33,-**	963-237	**235,-**	962-237 R	**72,-**
200 g	0,100	307-08	**235,-**	317-080-400	**7,70**	317-080-600	**15,-**	317-080-100	**33,-**	963-238	**235,-**	962-238 R	**72,-**
500 g	0,250	307-09	**310,-**	317-090-400	**8,50**	317-090-600	**20,-**	317-090-100	**39,-**	963-239	**235,-**	962-239 R	**72,-**
1 kg	0,500	307-11	**495,-**	317-110-400	**10,-**	317-110-600	**28,-**	317-110-100	**63,-**	963-241	**235,-**	962-241 R	**72,-**
2 kg	1,000	307-12	**700,-**	317-120-400	**13,-**	317-120-600	**34,-**	317-120-100	**65,-**	963-242	**520,-**	962-242 R	**89,-**
5 kg	2,500	307-13	**1200,-**	317-130-400	**25,-**	317-130-600	**56,-**	317-130-100	**99,-**	963-243	**520,-**	962-243 R	**89,-**
10 kg	5,000	307-14	**1850,-**	317-140-400	**25,-**	317-140-600	**79,-**	317-140-100	**115,-**	963-244	**520,-**	962-244 R	**89,-**
20 kg	10,000	307-15	**4960,-**	-	-	317-150-600	**111,-**	317-150-100	**630,-**	963-245	**1280,-**	962-245 R	**720,-**
50 kg	25,000	307-16	**8500,-**	-	-	317-160-600	**320,-**	317-160-100	**880,-**	963-246	**1500,-**	962-246 R	**800,-**

*** For E1 weights > 1g at the point of initial calibration, a volume determination will be carried out in accordance with OIML:R111. When recalibrating, this is not required.**

Class E1 · Weight sets, knob shape

Test weight material: stainless steel polished

Weight set	Knob shape in plastic case		Knob shape in aluminium protected case		Knob shape in wooden case		DAkkS certificate Initial calibration*		DAkkS certificate Recalibration	
	KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 mg – 500 mg	308-42	**940,-**	308-426	**910,-**			962-250	**415,-**	962-250 R	**465,-**
1 mg – 50 g	303-024	**1630,-**	303-026	**1650,-**	303-02	**1680,-**	963-201	**1330,-**	962-201 R	**770,-**
1 mg – 100 g	303-034	**1820,-**	303-036	**1820,-**	303-03	**1870,-**	963-202	**1450,-**	962-202 R	**790,-**
1 mg – 200 g	303-044	**2140,-**	303-046	**2160,-**	303-04	**2190,-**	963-203	**1670,-**	962-203 R	**870,-**
1 mg – 500 g	303-054	**2470,-**	303-056	**2490,-**	303-05	**2520,-**	963-204	**1770,-**	962-204 R	**910,-**
1 mg – 1 kg	303-064	**3090,-**	303-066	**3180,-**	303-06	**3050,-**	963-205	**1890,-**	962-205 R	**980,-**
1 mg – 2 kg	303-074	**4370,-**	303-076	**4350,-**	303-07	**4460,-**	963-206	**2460,-**	962-206 R	**1040,-**
1 mg – 5 kg	303-084	**5570,-**	303-086	**5610,-**	303-08	**5770,-**	963-207	**2750,-**	962-207 R	**1080,-**
1 mg – 10 kg	-	-	303-096	**7540,-**	303-09	**7690,-**	963-208	**3130,-**	962-208 R	**1120,-**
1 g – 50 g	304-024	**900,-**	304-026	**920,-**	304-02	**950,-**	963-215	**960,-**	962-215 R	**340,-**
1 g – 100 g	304-034	**1070,-**	304-036	**1090,-**	304-03	**1120,-**	963-216	**1050,-**	962-216 R	**370,-**
1 g – 200 g	304-044	**1490,-**	304-046	**1510,-**	304-04	**1540,-**	963-217	**1280,-**	962-217 R	**445,-**
1 g – 500 g	304-054	**1800,-**	304-056	**1820,-**	304-05	**1850,-**	963-218	**1390,-**	962-218 R	**490,-**
1 g – 1 kg	304-064	**2210,-**	304-066	**2230,-**	304-06	**2290,-**	963-219	**1520,-**	962-219 R	**520,-**
1 g – 2 kg	304-074	**3570,-**	304-076	**3590,-**	304-07	**3650,-**	963-220	**2130,-**	962-220 R	**600,-**
1 g – 5 kg	304-084	**4670,-**	304-086	**4690,-**	304-08	**4790,-**	963-221	**2500,-**	962-221 R	**620,-**
1 g – 10 kg	-	-	304-096	**6490,-**	304-09	**6610,-**	963-222	**2910,-**	962-222 R	**670,-**

Test weights and boxes
Class E2

Milligram weights, flat polygonal sheet

Individual weights, compact shape

Individual weights, knob shape

Plastic box, lined, for individual weights ≤ 50 g

Plastic box, lined, for individual weights ≥ 100 g

Aluminium protected box, lined, for individual weights

Wooden box, lined, for individual weights ≤ 500 g

Wooden box, lined, for individual weights ≥1 kg

Milligram weight set in plastic box (318-22)

Milligram weight set in aluminium protected box, lined (318-226)

Plastic case, lined, for weight sets, compact shape/ knob shape

Aluminium protected case, lined, for weight sets, compact shape/ knob shape

Wooden case, lined, for weight sets, compact shape/ knob shape

17

Class E2 · Milligram weights, flat polygonal sheet

Test weight material: stainless steel

Weight	Tol +/- mg	Milligram weight, flat polygonal sheet		Plastic box		Aluminium protected box		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 mg	0,006	318-01	**29,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-351	**31,-**
2 mg	0,006	318-02	**29,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-352	**31,-**
5 mg	0,006	318-03	**29,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-353	**31,-**
10 mg	0,008	318-04	**29,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-354	**31,-**
20 mg	0,010	318-05	**29,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-355	**31,-**
50 mg	0,012	318-06	**29,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-356	**31,-**
100 mg	0,016	318-07	**29,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-357	**31,-**
200 mg	0,020	318-08	**29,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-358	**31,-**
500 mg	0,025	318-09	**29,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-359	**31,-**

Class E2 · Individual weights, compact shape or knob shape

Test weight material: stainless steel polished

Weight	Tol +/- mg	Individual weights, compact shape		Individual weights, knob shape		Plastic box		Aluminium protected box		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 g	0,03	316-01	**39,-**	317-01	**59,-**	317-020-400	**4,80**	317-010-600	**15,-**	317-010-100	**26,-**	962-331	**31,-**
2 g	0,04	316-02	**39,-**	317-02	**60,-**	317-020-400	**4,80**	317-020-600	**18,-**	317-020-100	**27,-**	962-332	**31,-**
5 g	0,05	316-03	**40,-**	317-03	**63,-**	317-030-400	**4,80**	317-030-600	**16,-**	317-030-100	**28,-**	962-333	**31,-**
10 g	0,06	316-04	**41,-**	317-04	**67,-**	317-040-400	**4,80**	317-040-600	**16,-**	317-040-100	**27,-**	962-334	**31,-**
20 g	0,08	316-05	**47,-**	317-05	**76,-**	317-050-400	**4,80**	317-050-600	**16,-**	317-050-100	**31,-**	962-335	**31,-**
50 g	0,10	316-06	**51,-**	317-06	**80,-**	317-060-400	**6,-**	317-060-600	**15,-**	317-060-100	**31,-**	962-336	**31,-**
100 g	0,16	316-07	**57,-**	317-07	**88,-**	317-070-400	**8,-**	317-070-600	**15,-**	317-070-100	**33,-**	962-337	**39,-**
200 g	0,30	316-08	**67,-**	317-08	**114,-**	317-080-400	**7,70**	317-080-600	**15,-**	317-080-100	**33,-**	962-338	**39,-**
500 g	0,80	316-09	**108,-**	317-09	**193,-**	317-090-400	**8,50**	317-090-600	**20,-**	317-090-100	**39,-**	962-339	**39,-**
1 kg	1,60	316-11	**159,-**	317-11	**285,-**	317-110-400	**10,-**	317-110-600	**28,-**	317-110-100	**63,-**	962-341	**39,-**
2 kg	3,00	316-12	**275,-**	317-12	**440,-**	317-120-400	**13,-**	317-120-600	**34,-**	317-120-100	**65,-**	962-342	**48,-**
5 kg	8,00	316-13	**455,-**	317-13	**660,-**	317-130-400	**25,-**	317-130-600	**56,-**	317-130-100	**99,-**	962-343	**48,-**
10 kg	16,00	316-14	**700,-**	317-14	**990,-**	317-140-400	**25,-**	317-140-600	**79,-**	317-140-100	**115,-**	962-344	**48,-**
20 kg	30,00	-	-	317-15	**2570,-**	-	-	317-150-600	**111,-**	317-150-100	**630,-**	962-345	**62,-**
50 kg	80,00	-	-	317-16	**5390,-**	-	-	317-160-600	**320,-**	317-160-100	**880,-**	962-346	**71,-**

Class E2 · Weight sets, compact shape or knob shape

Test weight material: Milligramm weights stainless steel, individual weights: polished stainless steel

Weight sets	Compact shape in plastic case		Knob shape in plastic case		Knob shape in aluminium protected case		Knob shape in wooden case		DAkkS certificate	
	KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 mg - 500 mg	318-22	**365,-**	-	-	318-226	**420,-**			962-350	**215,-**
1 mg - 50 g	-	-	313-024	**930,-**	313-026	**940,-**	313-02	**970,-**	962-301	**350,-**
1 mg - 100 g	-	-	313-034	**1010,-**	313-036	**1020,-**	313-03	**1060,-**	962-302	**380,-**
1 mg - 200 g	-	-	313-044	**1220,-**	313-046	**1240,-**	313-04	**1270,-**	962-303	**445,-**
1 mg - 500 g	-	-	313-054	**1360,-**	313-056	**1380,-**	313-05	**1480,-**	962-304	**470,-**
1 mg - 1 kg	-	-	313-064	**1690,-**	313-066	**1710,-**	313-06	**1790,-**	962-305	**500,-**
1 mg - 2 kg	-	-	313-074	**2560,-**	313-076	**2590,-**	313-07	**2650,-**	962-306	**550,-**
1 mg - 5 kg	-	-	313-084	**3220,-**	313-086	**3260,-**	313-08	**3410,-**	962-307	**590,-**
1 mg - 10 kg	-	-	-	-	313-096	**4360,-**	313-09	**4500,-**	962-308	**630,-**
1 g - 50 g	312-024	**425,-**	314-024	**610,-**	314-026	**630,-**	314-02	**650,-**	962-315	**145,-**
1 g - 100 g	312-034	**485,-**	314-034	**680,-**	314-036	**700,-**	314-03	**740,-**	962-316	**173,-**
1 g - 200 g	312-044	**600,-**	314-044	**870,-**	314-046	**890,-**	314-04	**940,-**	962-317	**230,-**
1 g - 500 g	312-054	**710,-**	314-054	**1070,-**	314-056	**1090,-**	314-05	**1160,-**	962-318	**260,-**
1 g - 1 kg	312-064	**970,-**	314-064	**1370,-**	314-066	**1390,-**	314-06	**1470,-**	962-319	**290,-**
1 g - 2 kg	312-074	**1350,-**	314-074	**2250,-**	314-076	**2280,-**	314-07	**2340,-**	962-320	**355,-**
1 g - 5 kg	312-084	**1790,-**	314-084	**2910,-**	314-086	**2950,-**	314-08	**3100,-**	962-321	**405,-**
1 g -10 kg	-	-	-	-	314-096	**4020,-**	314-09	**4190,-**	962-322	**440,-**

Note

Our highly-accurate OIML test weights are also available as **Premium+ weights** for that extra level of safety.
See all details page 183 or on **www.kern-lab.com/premium+**

Test weights and boxes
Class F1

Milligram weights,
flat polygonal sheet

Individual weights/
Weight sets,
ECO shape

Individual weights/
Weight sets,
knob shape

Test weights (10 – 50 kg),
polished stainless steel,
KERN 327-141 ff, optional:
Wooden box

Block weight,
polished stainless steel

Plastic box,
lined, for
individual
weights
≤ 200 g

Plastic box,
lined, for
individual
weights
≥ 500 g

Aluminium protected box, lined,
for individual weights

Wooden box, lined,
for individual weights ≤ 500 g

Wooden box, lined,
for individual weights ≥1 kg

Milligram weight
set in plastic box
(328-22)

Milligram weight
set in aluminium
protected box,
lined (328-226)

Plastic case, lined
for weight sets, ECO shape/
knob shape

Aluminium protected case, lined,
for weight sets ECO shape/
knob shape

Wooden case, lined,
for weight sets ECO shape/
knob shape

Class F1 · Milligram weights, flat polygonal sheet

Test weight material: stainless steel

Weight	Tol +/- mg	Milligram weight, flat polygonal sheet		Plastic box		Aluminium protected box		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 mg	0,020	328-01	**13,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-451	**20,-**
2 mg	0,020	328-02	**13,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-452	**20,-**
5 mg	0,020	328-03	**13,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-453	**20,-**
10 mg	0,025	328-04	**13,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-454	**20,-**
20 mg	0,03	328-05	**13,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-455	**20,-**
50 mg	0,04	328-06	**13,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-456	**20,-**
100 mg	0,05	328-07	**13,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-457	**20,-**
200 mg	0,06	328-08	**13,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-458	**20,-**
500 mg	0,08	328-09	**13,-**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-459	**20,-**

Class F1 · Individual weights, ECO shape or knob shape

Test weight material: stainless steel polished

Weight	Tol +/- mg	Individual weight, ECO shape		Individual weight, knob shape		Plastic box		Aluminium protected box		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 g	0,10	326-01	**34,-**	327-01	**39,-**	347-030-400	**2,-**	317-010-600	**15,-**	317-010-100	**26,-**	962-431	**20,-**
2 g	0,12	326-02	**34,-**	327-02	**39,-**	347-030-400	**2,-**	317-020-600	**18,-**	317-020-100	**27,-**	962-432	**20,-**
5 g	0,16	326-03	**36,-**	327-03	**40,-**	347-030-400	**2,-**	317-030-600	**16,-**	317-030-100	**28,-**	962-433	**20,-**
10 g	0,20	326-04	**36,-**	327-04	**44,-**	347-050-400	**2,-**	317-040-600	**16,-**	317-040-100	**27,-**	962-434	**20,-**
20 g	0,25	326-05	**38,-**	327-05	**50,-**	347-050-400	**2,-**	317-050-600	**16,-**	317-050-100	**31,-**	962-435	**20,-**
50 g	0,30	326-06	**44,-**	327-06	**58,-**	347-070-400	**2,-**	317-060-600	**15,-**	317-060-100	**31,-**	962-436	**20,-**
100 g	0,50	326-07	**49,-**	327-07	**63,-**	347-070-400	**2,-**	317-070-600	**15,-**	317-070-100	**33,-**	962-437	**22,-**
200 g	1,00	326-08	**59,-**	327-08	**85,-**	347-080-400	**2,-**	317-080-600	**15,-**	317-080-100	**33,-**	962-438	**22,-**
500 g	2,50	326-09	**98,-**	327-09	**137,-**	347-090-400	**3,-**	317-090-600	**20,-**	317-090-100	**39,-**	962-439	**22,-**
1 kg	5,00	326-11	**130,-**	327-11	**173,-**	347-110-400	**3,80**	317-110-600	**28,-**	317-110-100	**63,-**	962-441	**22,-**
2 kg	10	326-12	**215,-**	327-12	**270,-**	347-120-400	**5,-**	317-120-600	**34,-**	317-120-100	**65,-**	962-442	**29,-**
5 kg	25	326-13	**290,-**	327-13	**405,-**	347-130-400	**11,-**	317-130-600	**56,-**	317-130-100	**99,-**	962-443	**29,-**
10 kg	50	326-14	**540,-**	327-14	**740,-**	347-140-400	**16,-**	317-140-600	**79,-**	317-140-100	**115,-**	962-444	**29,-**
20 kg	100	–	–	327-15	**1990,-**	–	–	317-150-600	**111,-**	317-150-100	**630,-**	962-445	**32,-**
50 kg	250	–	–	327-16	**4430,-**	–	–	317-160-600	**320,-**	317-160-100	**880,-**	962-446	**44,-**

Class F1 · Block weights

Block weight material: stainless steel polished

Weight	Tol +/- mg	Block weight		Aluminium protected case		DAkkS certificate	
		KERN	€	KERN	€	KERN	€
5 kg	25	326-36	**1050,-**	346-060-600	**84,-**	962-443	**29,-**
10 kg	50	326-37	**1540,-**	346-070-600	**110,-**	962-444	**29,-**
20 kg	100	326-38	**2120,-**	346-080-600	**160,-**	962-445	**32,-**
50 kg	250	326-39	**5250,-**	346-090-600	**180,-**	962-446	**44,-**

Class F1 · Test weights, stackable

Test weight material: stainless steel polished

Weight	Tol +/- mg	Test weight		Wooden case		DAkkS certificate	
		KERN	€	KERN	€	KERN	€
10 kg	50	327-141	**1400,-**	337-141-100	**340,-**	962-444	**29,-**
20 kg	100	327-151	**1800,-**	337-151-100	**370,-**	962-445	**32,-**
50 kg	250	327-161	**4220,-**	337-161-100	**570,-**	962-446	**44,-**

Class F1 · Weight sets, ECO shape

Test weight material: Milligramm weights stainless steel, Individual weights: polished stainless steel

Weight sets	ECO shape in plastic case		ECO shape in aluminium protected case		ECO shape in wooden case		DAkkS certificate	
	KERN	€	KERN	€	KERN	€	KERN	€
1 mg - 500 mg	328-22	**194,-**	328-226	**240,-**	-	-	962-450	**112,-**
1 mg - 50 g	325-024	**550,-**	325-026	**560,-**	325-022	**600,-**	962-401	**188,-**
1 mg - 100 g	325-034	**600,-**	325-036	**620,-**	325-032	**650,-**	962-402	**200,-**
1 mg - 200 g	325-044	**690,-**	325-046	**710,-**	325-042	**740,-**	962-403	**225,-**
1 mg - 500 g	325-054	**790,-**	325-056	**810,-**	325-052	**910,-**	962-404	**235,-**
1 mg - 1 kg	325-064	**1010,-**	325-066	**1020,-**	325-062	**1060,-**	962-405	**245,-**
1 mg - 2 kg	325-074	**1300,-**	325-076	**1320,-**	325-072	**1370,-**	962-406	**280,-**
1 mg - 5 kg	325-084	**1560,-**	325-086	**1620,-**	325-082	**1740,-**	962-407	**295,-**
1 mg - 10 kg	-	-	325-096	**2340,-**	325-092	**2320,-**	962-408	**320,-**
1 g - 50 g	326-024	**375,-**	326-026	**390,-**	326-022	**440,-**	962-415	**75,-**
1 g - 100 g	326-034	**420,-**	326-036	**440,-**	326-032	**490,-**	962-416	**87,-**
1 g - 200 g	326-044	**520,-**	326-046	**540,-**	326-042	**600,-**	962-417	**110,-**
1 g - 500 g	326-054	**610,-**	326-056	**630,-**	326-052	**750,-**	962-418	**122,-**
1 g - 1 kg	326-064	**830,-**	326-066	**850,-**	326-062	**900,-**	962-419	**134,-**
1 g - 2 kg	326-074	**1110,-**	326-076	**1140,-**	326-072	**1220,-**	962-420	**169,-**
1 g - 5 kg	326-084	**1390,-**	326-086	**1420,-**	326-082	**1600,-**	962-421	**187,-**
1 g - 10 kg	-	-	326-096	**2070,-**	326-092	**2160,-**	962-422	**205,-**

Class F1 · Weight sets, knob shape

Test weight material: Milligramm weights stainless steel, Individual weights: polished stainless steel

Weight sets	Knob shape in plastic case		Knob shape in aluminium protected case		Knob shape in wooden case		DAkkS certificate	
	KERN	€	KERN	€	KERN	€	KERN	€
1 mg - 500 mg	328-22	**194,-**	328-226	**240,-**	-	-	962-450	**112,-**
1 mg - 50 g	323-024	**610,-**	323-026	**630,-**	323-02	**640,-**	962-401	**188,-**
1 mg - 100 g	323-034	**670,-**	323-036	**690,-**	323-03	**700,-**	962-402	**200,-**
1 mg - 200 g	323-044	**820,-**	323-046	**840,-**	323-04	**880,-**	962-403	**225,-**
1 mg - 500 g	323-054	**970,-**	323-056	**990,-**	323-05	**1090,-**	962-404	**235,-**
1 mg - 1 kg	323-064	**1240,-**	323-066	**1240,-**	323-06	**1290,-**	962-405	**245,-**
1 mg - 2 kg	323-074	**1640,-**	323-076	**1670,-**	323-07	**1730,-**	962-406	**280,-**
1 mg - 5 kg	323-084	**2020,-**	323-086	**2060,-**	323-08	**2200,-**	962-407	**295,-**
1 mg - 10 kg	-	-	323-096	**2940,-**	323-09	**3040,-**	962-408	**320,-**
1 g - 50 g	324-024	**430,-**	324-026	**440,-**	324-02	**480,-**	962-415	**75,-**
1 g - 100 g	324-034	**490,-**	324-036	**510,-**	324-03	**560,-**	962-416	**87,-**
1 g - 200 g	324-044	**650,-**	324-046	**670,-**	324-04	**720,-**	962-417	**110,-**
1 g - 500 g	324-054	**780,-**	324-056	**810,-**	324-05	**930,-**	962-418	**122,-**
1 g - 1 kg	324-064	**1060,-**	324-066	**1070,-**	324-06	**1130,-**	962-419	**134,-**
1 g - 2 kg	324-074	**1460,-**	324-076	**1490,-**	324-07	**1570,-**	962-420	**169,-**
1 g - 5 kg	324-084	**1840,-**	324-086	**1940,-**	324-08	**2040,-**	962-421	**187,-**
1 g - 10 kg	-	-	324-096	**2790,-**	324-09	**2870,-**	962-422	**205,-**

Test weights and boxes
Class F2

Milligram weights, flat polygonal sheet

Individual weights/Weight sets, knob shape

Block weight, stainless steel

Test weights (10 – 50 kg), finely turned stainless steel KERN 337-141 ff, optional: Wooden box

Plastic box, lined, for individual weights ≤ 200 g

Plastic box, lined, for individual weights ≥ 500 g

Aluminium protected box, lined, for individual weights

Wooden box, not lined for individual weights ≤ 500 g

Wooden box, not lined, for individual weights ≥1 kg

Milligram weight set in plastic box (338-22)

Milligram weight set in aluminium protected box, lined (338-226)

Plastic case, lined, for weight sets, knob shape

Aluminium protected case, lined, for weight sets, knob shape

Wooden case, for weight sets, knob shape

17

Class F2 · Milligram weights, flat polygonal sheet

Test weight material: stainless steel

Weight	Tol +/- mg	Milligram weight, flat polygonal sheet		Plastic box		Aluminium protected box		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 mg	0,06	338-01	**9,70**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-451	**20,-**
2 mg	0,06	338-02	**9,70**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-452	**20,-**
5 mg	0,06	338-03	**9,70**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-453	**20,-**
10 mg	0,08	338-04	**9,70**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-454	**20,-**
20 mg	0,10	338-05	**9,70**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-455	**20,-**
50 mg	0,12	338-06	**9,70**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-456	**20,-**
100 mg	0,16	338-07	**9,70**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-457	**20,-**
200 mg	0,20	338-08	**9,70**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-458	**20,-**
500 mg	0,25	338-09	**9,70**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-459	**20,-**

Class F2 · Individual weights, knob shape

Test weight material: finely turned stainless steel

Weight	Tol +/- mg	Individual weight, knob shape		Plastic box		Aluminium protected box		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 g	0,3	337-01	**23,-**	347-030-400	**2,-**	317-010-600	**15,-**	337-010-200	**21,-**	962-431	**20,-**
2 g	0,4	337-02	**24,-**	347-030-400	**2,-**	317-020-600	**18,-**	337-020-200	**17,-**	962-432	**20,-**
5 g	0,5	337-03	**26,-**	347-030-400	**2,-**	317-030-600	**16,-**	337-030-200	**18,-**	962-433	**20,-**
10 g	0,6	337-04	**28,-**	347-050-400	**2,-**	317-040-600	**16,-**	337-040-200	**18,-**	962-434	**20,-**
20 g	0,8	337-05	**29,-**	347-050-400	**2,-**	317-050-600	**16,-**	337-050-200	**18,-**	962-435	**20,-**
50 g	1,0	337-06	**32,-**	347-070-400	**2,-**	317-060-600	**15,-**	337-060-200	**20,-**	962-436	**20,-**
100 g	1,6	337-07	**36,-**	347-070-400	**2,-**	317-070-600	**15,-**	337-070-200	**24,-**	962-437	**22,-**
200 g	3,0	337-08	**48,-**	347-080-400	**2,-**	317-080-600	**15,-**	337-080-200	**25,-**	962-438	**22,-**
500 g	8,0	337-09	**71,-**	347-090-400	**3,-**	317-090-600	**20,-**	337-090-200	**26,-**	962-439	**22,-**
1 kg	16	337-11	**103,-**	347-110-400	**3,80**	317-110-600	**28,-**	337-110-200	**42,-**	962-441	**22,-**
2 kg	30	337-12	**163,-**	347-120-400	**5,-**	317-120-600	**34,-**	337-120-200	**47,-**	962-442	**29,-**
5 kg	80	337-13	**295,-**	347-130-400	**11,-**	317-130-600	**56,-**	337-130-200	**78,-**	962-443	**29,-**
10 kg	160	337-14	**570,-**	347-140-400	**16,-**	317-140-600	**79,-**	337-140-200	**82,-**	962-444	**29,-**
20 kg	300	337-15	**860,-**	-	-	317-150-600	**111,-**	337-150-200	**390,-**	962-445	**32,-**
50 kg	800	337-16	**1520,-**	-	-	317-160-600	**320,-**	337-160-200	**610,-**	962-446	**44,-**

Class F2 · Test weights

Test weight material: finely turned stainless steel

Weight	Tol +/- mg	Test weight		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€
10 kg	160	337-141	**650,-**	337-141-200	**360,-**	962-444	**29,-**
20 kg	300	337-151	**790,-**	337-151-200	**390,-**	962-445	**32,-**
50 kg	800	337-161	**2130,-**	337-161-200	**610,-**	962-446	**44,-**

Class F2 · Block weights

Block weight material: stainless steel glass bead blasted

Weight	Tol +/- mg	Block weight		Aluminium protected case		DAkkS certificate	
		KERN	€	KERN	€	KERN	€
5 kg	80	336-36	**610,-**	346-060-600	**84,-**	962-443	**29,-**
10 kg	160	336-37	**860,-**	346-070-600	**110,-**	962-444	**29,-**
20 kg	300	336-38	**1180,-**	346-080-600	**160,-**	962-445	**32,-**
50 kg	800	336-39	**3080,-**	346-090-600	**180,-**	962-446	**44,-**

Class F2 · Weight sets, knob shape

Test weight material: Milligramm weights stainless steel, individual weights finely turned stainless steel

Weight	Knob shape in plastic case		Knob shape in aluminium protected case		Knob shape in wooden case		DAkkS certificate	
	KERN	€	KERN	€	KERN	€	KERN	€
1 mg - 500 mg	338-22	**151,-**	338-226	**200,-**	-	-	962-450	**112,-**
1 mg - 50 g	333-024	**390,-**	333-026	**410,-**	333-02	**410,-**	962-401	**188,-**
1 mg - 100 g	333-034	**435,-**	333-036	**450,-**	333-03	**455,-**	962-402	**200,-**
1 mg - 200 g	333-044	**510,-**	333-046	**520,-**	333-04	**520,-**	962-403	**225,-**
1 mg - 500 g	333-054	**580,-**	333-056	**600,-**	333-05	**610,-**	962-404	**235,-**
1 mg - 1 kg	333-064	**730,-**	333-066	**750,-**	333-06	**760,-**	962-405	**245,-**
1 mg - 2 kg	333-074	**1030,-**	333-076	**1050,-**	333-07	**1060,-**	962-406	**280,-**
1 mg - 5 kg	333-084	**1380,-**	333-086	**1420,-**	333-08	**1420,-**	962-407	**295,-**
1 mg - 10 kg	-	-	333-096	**2060,-**	333-09	**2080,-**	962-408	**320,-**
1 g - 50 g	334-024	**255,-**	334-026	**275,-**	334-02	**270,-**	962-415	**75,-**
1 g - 100 g	334-034	**300,-**	334-036	**315,-**	334-03	**320,-**	962-416	**87,-**
1 g - 200 g	334-044	**395,-**	334-046	**415,-**	334-04	**415,-**	962-417	**110,-**
1 g - 500 g	334-054	**470,-**	334-056	**490,-**	334-05	**490,-**	962-418	**122,-**
1 g - 1 kg	334-064	**610,-**	334-066	**620,-**	334-06	**630,-**	962-419	**134,-**
1 g - 2 kg	334-074	**890,-**	334-076	**940,-**	334-07	**940,-**	962-420	**169,-**
1 g - 5 kg	334-084	**1210,-**	334-086	**1300,-**	334-08	**1290,-**	962-421	**187,-**
1 g -10 kg	-	-	334-096	**1940,-**	334-09	**1950,-**	962-422	**205,-**

Test weights and boxes
Class M1

Milligram weights,
flat polygonal sheet

Individual weights/weight sets, knob shape, finely turned stainless steel

Hook weights, finely turned stainless steel

Slotted weights, finely turned stainless steel

Plastic box, for individual weights ≤ 200 g, for hook weights and slotted weights ≤ 50 g

Plastic box, lined, for individual weights ≥ 500 g, for hook weights and slotted weights ≥ 100 g

Aluminium protected box, lined, for individual weights

Wooden box, not lined, for individual weights ≤ 500 g

Wooden box, not lined, for individual weights ≥1 kg

Milligram weight set in plastic box (348-22)

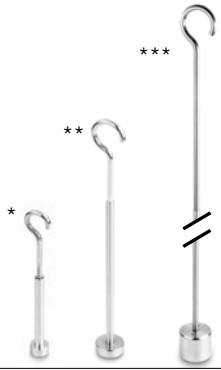
Milligram weight set in aluminium protected box, lined (348-226)

Plastic case, lined, for weight sets, knob shape, finely turned stainless steel

Aluminium protected case, lined, for weight sets, knob shape, finely turned stainless steel

Wooden case, for weight sets, knob shape, finely turned stainless steel

Test weights (10 – 50 kg), finely turned stainless steel KERN 347-141 ff, optional: Wooden box



Beam bars, for fixing slotted weights, aluminium or finely turned stainless steel

* | ** | *** see page 201

Block weights, lacquered cast iron/stainless steel glass bead blasted, optional: Aluminium protected case, lined

Class M1 · Milligram weights, flat polygonal sheet

Test weight material: stainless steel

Weight	Tol +/- mg	Milligram weight, flat polygonal sheet		Plastic box		Aluminium protected box		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 mg	0,20	348-01	**5,10**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-651	**16,-**
2 mg	0,20	348-02	**5,10**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-652	**16,-**
5 mg	0,20	348-03	**5,10**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-653	**16,-**
10 mg	0,25	348-04	**5,10**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-654	**16,-**
20 mg	0,30	348-05	**5,10**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-655	**16,-**
50 mg	0,40	348-06	**5,10**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-656	**16,-**
100 mg	0,50	348-07	**5,10**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-657	**16,-**
200 mg	0,60	348-08	**5,10**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-658	**16,-**
500 mg	0,80	348-09	**5,10**	347-009-400	**2,-**	317-009-600	**15,-**	338-090-200	**27,-**	962-659	**16,-**

Class M1 · Individual weights, knob shape

Test weights material: stainless steel

Weight	Tol +/- mg	Individual weight		Plastic box		Aluminium protected box		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 g	1,0	347-01	**8,40**	347-030-400	**2,-**	317-010-600	**15,-**	337-010-200	**21,-**	962-631	**16,-**
2 g	1,2	347-02	**8,80**	347-030-400	**2,-**	317-020-600	**18,-**	337-020-200	**17,-**	962-632	**16,-**
5 g	1,6	347-03	**8,90**	347-030-400	**2,-**	317-030-600	**16,-**	337-030-200	**18,-**	962-633	**16,-**
10 g	2,0	347-04	**9,60**	347-050-400	**2,-**	317-040-600	**16,-**	337-040-200	**18,-**	962-634	**16,-**
20 g	2,5	347-05	**14,-**	347-050-400	**2,-**	317-050-600	**16,-**	337-050-200	**18,-**	962-635	**16,-**
50 g	3,0	347-06	**16,-**	347-070-400	**2,-**	317-060-600	**15,-**	337-060-200	**20,-**	962-636	**16,-**
100 g	5,0	347-07	**20,-**	347-070-400	**2,-**	317-070-600	**15,-**	337-070-200	**24,-**	962-637	**18,-**
200 g	10	347-08	**25,-**	347-080-400	**2,-**	317-080-600	**15,-**	337-080-200	**25,-**	962-638	**18,-**
500 g	25	347-09	**41,-**	347-090-400	**3,-**	317-090-600	**20,-**	337-090-200	**26,-**	962-639	**18,-**
1 kg	50	347-11	**64,-**	347-110-400	**3,80**	317-110-600	**28,-**	337-110-200	**42,-**	962-641	**18,-**
2 kg	100	347-12	**120,-**	347-120-400	**5,-**	317-120-600	**34,-**	337-120-200	**47,-**	962-642	**19,-**
5 kg	250	347-13	**270,-**	347-130-400	**11,-**	317-130-600	**56,-**	337-130-200	**78,-**	962-643	**19,-**
10 kg	500	347-14	**520,-**	347-140-400	**16,-**	317-140-600	**79,-**	337-140-200	**82,-**	962-644	**19,-**

Class M1 · Block weights

Block weight material: lacquered cast iron, surface and edges machined or unmachined (ECO)

Weight	Tol +/- g	Block weight		ECO Block weight		Aluminium protected case		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€
5 kg	0,25	346-86	**76,-**	346-76	**61,-**	346-060-600	**84,-**	962-643	**19,-**
10 kg	0,50	346-87	**132,-**	346-77	**102,-**	346-070-600	**110,-**	962-644	**19,-**
20 kg	1,00	346-88	**245,-**	346-78	**188,-**	346-080-600	**160,-**	962-645	**24,-**
50 kg	2,50	346-89	**590,-**	346-79	**455,-**	346-090-600	**180,-**	962-646	**27,-**

Class M1 · Block weights

Block weight material: stainless steel glass bead blasted

Weight	Tol +/- g	Block weight		Aluminium protected case		DAkkS certificate	
		KERN	€	KERN	€	KERN	€
5 kg	0,25	346-06	**410,-**	346-060-600	**84,-**	962-643	**19,-**
10 kg	0,50	346-07	**550,-**	346-070-600	**110,-**	962-644	**19,-**
20 kg	1,00	346-08	**740,-**	346-080-600	**160,-**	962-645	**24,-**
50 kg	2,50	346-09	**1970,-**	346-090-600	**180,-**	962-646	**27,-**

Class M1 · Test weights, stackable

Test weight material: finely turned stainless steel

Weight	Tol +/- g	Test weight KERN	€	Wooden box KERN	€	DAkkS certificate KERN	€
10 kg	0,5	347-141	**650,-**	337-141-200	**360,-**	962-644	**19,-**
20 kg	1,0	347-151	**800,-**	337-151-200	**390,-**	962-645	**24,-**
50 kg	2,5	347-161	**2130,-**	337-161-200	**610,-**	962-646	**27,-**

Class M1 · Heavy duty weights, stackable

Heavy duty weight material: lacquered cast iron
Designed to be lifted with forklift trucks or cranes, delivery time is approx. 6–8 weeks
Dimensions: see internet on www.kern-sohn.com

Weight	Tol +/- g	Heavy duty weight KERN	€	DAkkS certificate KERN	€
100 kg	5	346-81	**2420,-**	962-691	**70,-**
200 kg	10	346-82	**3520,-**	962-692	**70,-**
500 kg	25	346-83	**6290,-**	962-693	**70,-**
1000 kg	50	346-84	**9870,-**	962-694	**153,-**
2000 kg	100	346-85	**18060,-**	962-695	**280,-**

Note

We also offer a large range of heavy-duty weights in other materials, (e.g. stainless steel) and in other forms (e.g. discs) or individual weight containers, please ask for details.

Class M1 · Weight sets, knob shape

Test weight material: Milligramm weights stainless steel, individual weights finely turned stainless steel

Weight	Knob shape, in plastic case KERN	€	Knob shape, in aluminium protected case KERN	€	Knob shape, in wooden case KERN	€	DAkkS certificate KERN	€
1 mg - 500 mg	348-22	**94,-**	348-226	**159,-**	-	-	962-650	**70,-**
1 mg – 50 g	343-024	**265,-**	343-026	**240,-**	343-02	**240,-**	962-601	**119,-**
1 mg – 100 g	343-034	**280,-**	343-036	**260,-**	343-03	**270,-**	962-602	**125,-**
1 mg – 200 g	343-044	**325,-**	343-046	**305,-**	343-04	**315,-**	962-603	**141,-**
1 mg – 500 g	343-054	**360,-**	343-056	**350,-**	343-05	**360,-**	962-604	**147,-**
1 mg – 1 kg	343-064	**550,-**	343-066	**450,-**	343-06	**520,-**	962-605	**154,-**
1 mg – 2 kg	343-074	**740,-**	343-076	**690,-**	343-07	**730,-**	962-606	**170,-**
1 mg – 5 kg	343-084	**990,-**	343-086	**980,-**	343-08	**1040,-**	962-607	**180,-**
1 mg – 10 kg	-	-	343-096	**1500,-**	343-09	**1560,-**	962-608	**188,-**
1 g – 50 g	344-024	**178,-**	344-026	**171,-**	344-02	**143,-**	962-615	**47,-**
1 g – 100 g	344-034	**197,-**	344-036	**191,-**	344-03	**176,-**	962-616	**55,-**
1 g – 200 g	344-044	**240,-**	344-046	**235,-**	344-04	**225,-**	962-617	**68,-**
1 g – 500 g	344-054	**280,-**	344-056	**275,-**	344-05	**275,-**	962-618	**76,-**
1 g – 1 kg	344-064	**465,-**	344-066	**380,-**	344-06	**415,-**	962-619	**83,-**
1 g – 2 kg	344-074	**650,-**	344-076	**610,-**	344-07	**630,-**	962-620	**100,-**
1 g – 5 kg	344-084	**900,-**	344-086	**920,-**	344-08	**930,-**	962-621	**108,-**
1 g – 10 kg	-	-	344-096	**1440,-**	344-09	**1450,-**	962-622	**116,-**

Class M1 · Hook weights

Hook weight material: finely turned stainless steel

Weight	Tol +/- mg	Hook weight		Plastic box, linned		DAkkS certificate	
		KERN	€	KERN	€	KERN	€
1 g	1,0	347-016	**24,-**	347-030-400	**2,-**	962-631	**16,-**
2 g	1,2	347-026	**24,-**	347-030-400	**2,-**	962-632	**16,-**
5 g	1,6	347-036	**24,-**	347-030-400	**2,-**	962-633	**16,-**
10 g	2,0	347-046	**25,-**	347-050-400	**2,-**	962-634	**16,-**
20 g	2,5	347-056	**27,-**	347-050-400	**2,-**	962-635	**16,-**
50 g	3,0	347-066	**33,-**	347-070-400	**2,-**	962-636	**16,-**
100 g	5,0	347-076	**35,-**	347-090-400	**3,-**	962-637	**18,-**
200 g	10,0	347-086	**41,-**	347-090-400	**3,-**	962-638	**18,-**
500 g	25,0	347-096	**78,-**	347-110-400	**3,80**	962-639	**18,-**
1 kg	50,0	347-116	**107,-**	347-120-400	**5,-**	962-641	**18,-**
2 kg	100,0	347-126	**176,-**	347-130-400	**11,-**	962-642	**19,-**
5 kg	250,0	347-136	**345,-**	347-140-400	**16,-**	962-643	**19,-**
10 kg	500,0	347-146	**570,-**	–	–	962-644	**19,-**

Class M1 · Slotted weights

Slotted weight material: finely turned stainless steel

Weight	Tol +/- mg	Slotted weight		Plastic box, lined		DAkkS certificate	
		KERN	€	KERN	€	KERN	€
1 g	1,0	347-015	**24,-**	347-030-400	**2,-**	962-631	**16,-**
2 g	1,2	347-025	**22,-**	347-030-400	**2,-**	962-632	**16,-**
5 g	1,6	347-035	**25,-**	347-030-400	**2,-**	962-633	**16,-**
10 g	2,0	347-045	**26,-**	347-030-400	**2,-**	962-634	**16,-**
20 g	2,5	347-055	**27,-**	347-080-400	**2,-**	962-635	**16,-**
50 g	3,0	347-065	**30,-**	347-080-400	**2,-**	962-636	**16,-**
100 g	5,0	347-075	**33,-**	347-090-400	**3,-**	962-637	**18,-**
200 g	10	347-085	**45,-**	347-090-400	**3,-**	962-638	**18,-**
500 g	25	347-095	**70,-**	347-110-400	**3,80**	962-639	**18,-**
1 kg	50	347-115	**126,-**	347-130-400	**11,-**	962-641	**18,-**
2 kg	100	347-125	**187,-**	347-130-400	**11,-**	962-642	**19,-**
5 kg	250	347-135	**325,-**	347-140-400	**16,-**	962-643	**19,-**
10 kg	500	347-145	**590,-**	347-140-400	**16,-**	962-644	**19,-**

Class M1 · Beam bars, for fixing slotted weights

Beam bars material: 10 g: aluminium, 100 g–1 kg: finely turned stainless steel

Own weight beam bar	Maximum total load [1]	Largest slotted weight possible	Material	Length	Beam bar		DAkkS certificate	
					KERN	€	KERN	€
10 g	200 g	100 g	Aluminium	117,5	347-445-100*	**35,-**	962-634	**16,-**
100 g	2 kg	1 kg	Stainless steel	238	347-075-100**	**58,-**	962-637	**18,-**
500 g	20 kg	10 kg	Stainless steel	639	347-095-100***	**92,-**	962-639	**18,-**
1 kg	40 kg	10 kg	Stainless steel	1020	347-115-100***	**148,-**	962-641	**18,-**

[1] is exclusive of the own weight of the beam bar, e.g. the maximum possible total weight is calculated from "Maximum total load" + "own weight beam bar";

* | ** | *** see page 198

Newton weights (N)

All hook and slotted weights as well as beam bars are available with N adjustment according to M1 tolerances, additional price € 8,–/pc.
We need to know the location of use and postal code.
DAkkS calibration certificate for N weights: identical to DAkkS prices for individual weights **M1**, additional price € 8,–

Test weights and boxes
Classes M2 · M3

Individual weights/Weight sets,
knob shape, stainless steel

Individual weights/Weight sets,
knob shape, lacquered cast iron

Block weights,
lacquered cast iron

Plastic box, lined,
for individual weights

Aluminium protected box,
lined, for individual weights

Wooden box, not lined, for
individual weights ≤ 500 g,
! not appropriate for
cast iron weights

Wooden box, not lined, for
individual weights ≥1 kg,
! not appropriate for
cast iron weights

Aluminium protected case,
lined, for block weights

Aluminium protected case, lined, for weight
sets knob shape, finely turned stainless steel,
! not appropriate for cast iron weights

Wooden case, for weight sets, knob shape,
finely turned stainless steel

Wooden block, for weight sets, knob shape,
lacquered cast iron

Class M2 · Individual weights, knob shape

Test weight material: finely turned stainless steel

Weight	Tol +/- mg	Individual weight, knob shape		Plastic box		Aluminium protected box		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 g	3	357-01	**8,40**	347-030-400	**2,-**	317-010-600	**15,-**	337-010-200	**21,-**	962-631	**16,-**
2 g	4	357-02	**8,70**	347-030-400	**2,-**	317-020-600	**18,-**	337-020-200	**17,-**	962-632	**16,-**
5 g	5	357-03	**8,90**	347-030-400	**2,-**	317-030-600	**16,-**	337-030-200	**18,-**	962-633	**16,-**
10 g	6	357-04	**9,60**	347-050-400	**2,-**	317-040-600	**16,-**	337-040-200	**18,-**	962-634	**16,-**
20 g	8	357-05	**14,-**	347-050-400	**2,-**	317-050-600	**16,-**	337-050-200	**18,-**	962-635	**16,-**
50 g	10	357-06	**16,-**	347-070-400	**2,-**	317-060-600	**15,-**	337-060-200	**20,-**	962-636	**16,-**
100 g	16	357-07	**20,-**	347-070-400	**2,-**	317-070-600	**15,-**	337-070-200	**24,-**	962-637	**18,-**
200 g	30	357-08	**24,-**	347-080-400	**2,-**	317-080-600	**15,-**	337-080-200	**25,-**	962-638	**18,-**
500 g	80	357-09	**41,-**	347-090-400	**3,-**	317-090-600	**20,-**	337-090-200	**26,-**	962-639	**18,-**
1 kg	160	357-11	**64,-**	347-110-400	**3,80**	317-110-600	**28,-**	337-110-200	**42,-**	962-641	**18,-**
2 kg	300	357-12	**120,-**	347-120-400	**5,-**	317-120-600	**34,-**	337-120-200	**47,-**	962-642	**19,-**
5 kg	800	357-13	**270,-**	347-130-400	**11,-**	317-130-600	**56,-**	337-130-200	**78,-**	962-643	**19,-**
10 kg	1600	357-14	**520,-**	347-140-400	**16,-**	317-140-600	**79,-**	337-140-200	**82,-**	962-644	**19,-**

Class M2 · Block weights

Block weight material: lacquered cast iron, surface and edges machined or unmachined (ECO)

Weight	Tol +/- g	Block weight		ECO block weight		Aluminium protected box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€
5 kg	0,8	356-86	**66,-**	356-76	**61,-**	346-060-600	**84,-**	962-643	**19,-**
10 kg	1,6	356-87	**132,-**	356-77	**102,-**	346-070-600	**110,-**	962-644	**19,-**
20 kg	3,0	356-88	**245,-**	356-78	**188,-**	346-080-600	**160,-**	962-645	**24,-**
50 kg	8,0	356-89	**590,-**	356-79	**455,-**	346-090-600	**180,-**	962-646	**27,-**

Class M2 · Weight sets, knob shape

Test weight material: finely turned stainless steel

Weight	Knob shape, in aluminium protected case		Knob shape, in wooden case		DAkkS certificate	
	KERN	€	KERN	€	KERN	€
1 g – 50 g	354-026	**137,-**	354-02	**108,-**	962-615	**47,-**
1 g – 100 g	354-036	**152,-**	354-03	**138,-**	962-616	**55,-**
1 g – 200 g	354-046	**192,-**	354-04	**179,-**	962-617	**68,-**
1 g – 500 g	354-056	**235,-**	354-05	**240,-**	962-618	**76,-**
1 g – 1 kg	354-066	**340,-**	354-06	**380,-**	962-619	**83,-**
1 g – 2 kg	354-076	**580,-**	354-07	**600,-**	962-620	**100,-**
1 g – 5 kg	354-086	**920,-**	354-08	**920,-**	962-621	**108,-**
1 g – 10 kg	354-096	**1530,-**	354-09	**1530,-**	962-622	**116,-**

Class M3 · Individual weights, knob shape

Test weight material: finely turned stainless steel

Weight	Tol +/- mg	Individual weight, knob shape		Plastic box		Aluminium protected box		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€	KERN	€
1 g	10	367-01	**8,40**	347-030-400	**2,-**	317-010-600	**15,-**	337-010-200	**21,-**	962-631	**16,-**
2 g	12	367-02	**8,50**	347-030-400	**2,-**	317-020-600	**18,-**	337-020-200	**17,-**	962-632	**16,-**
5 g	16	367-03	**8,60**	347-030-400	**2,-**	317-030-600	**16,-**	337-030-200	**18,-**	962-633	**16,-**
10 g	20	367-04	**9,10**	347-050-400	**2,-**	317-040-600	**16,-**	337-040-200	**18,-**	962-634	**16,-**
20 g	25	367-05	**12,-**	347-050-400	**2,-**	317-050-600	**16,-**	337-050-200	**18,-**	962-635	**16,-**
50 g	30	367-06	**14,-**	347-070-400	**2,-**	317-060-600	**15,-**	337-060-200	**20,-**	962-636	**16,-**
100 g	50	367-07	**18,-**	347-070-400	**2,-**	317-070-600	**15,-**	337-070-200	**24,-**	962-637	**18,-**
200 g	100	367-08	**23,-**	347-080-400	**2,-**	317-080-600	**15,-**	337-080-200	**25,-**	962-638	**18,-**
500 g	250	367-09	**39,-**	347-090-400	**3,-**	317-090-600	**20,-**	337-090-200	**26,-**	962-639	**18,-**
1 kg	500	367-11	**62,-**	347-110-400	**3,80**	317-110-600	**28,-**	337-110-200	**42,-**	962-641	**18,-**
2 kg	1000	367-12	**119,-**	347-120-400	**5,-**	317-120-600	**34,-**	337-120-200	**47,-**	962-642	**19,-**

Class M3 · Individual weights, knob and cylindrical shape

Test weight material: lacquered cast iron

Weight	Tol +/- g	Individual weight, knob and cylindrical shape		DAkkS certificate	
		KERN	€	KERN	€
100 g*	0,05	366-91	**25,-**	962-637	**18,-**
200 g*	0,10	366-92	**29,-**	962-638	**18,-**
500 g**	0,25	366-93	**40,-**	962-639	**18,-**
1 kg**	0,50	366-94	**47,-**	962-641	**18,-**
2 kg**	1,0	366-95	**80,-**	962-642	**19,-**
5 kg**	2,5	366-96	**145,-**	962-643	**19,-**
10 kg**	5,0	366-97	**265,-**	962-644	**19,-**

Class M3 · Block weights

Block weight material: lacquered cast iron, surface and edges machined or unmachined (ECO)

Weight	Tol +/- g	Block weight		ECO block weight		Aluminium protected box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€	KERN	€
5 kg	2,5	366-86	**66,-**	366-76	**61,-**	346-060-600	**84,-**	962-643	**19,-**
10 kg	5,0	366-87	**110,-**	366-77	**102,-**	346-070-600	**110,-**	962-644	**19,-**
20 kg	10	366-88	**196,-**	366-78	**188,-**	346-080-600	**160,-**	962-645	**24,-**
50 kg	25	366-89	**490,-**	366-79	**455,-**	346-090-600	**180,-**	962-646	**27,-**

Class M3 · Weight sets, knob and cylindrical shape

Test weight material: ≤ 50 g stainless steel, ≥ 100 g lacquered cast iron

Weight	Knob and cylindrical shape, in wooden block		DAkkS certificate	
	KERN	€	KERN	€
1 g – 1 kg	362-96	**250,-**	962-619	**83,-**
1 g – 2 kg	362-97	**400,-**	962-620	**100,-**
1 g – 5 kg	362-98	**510,-**	962-621	**108,-**
1 g – 10 kg	362-99	**720,-**	962-622	**116,-**

Individual weights ≤ 50 g

Individual weights 100 g and 200 g

Individual weights ≥ 500 g

Tweezers, weight grips, gloves, dusting brush

Tweezers
to be able to safely grip small test weights

For class	For weight	Length	Version	KERN	€
E1 - M3	1 mg – 200 g	105 mm	1 Stainless steel with silicone-coated tips	315-243	**15,-**
E1 - M3	500 g – 2 kg	250 mm	1 Stainless steel with silicone-coated tips	315-245	**60,-**
E1 - M3	≤ 5 g	130 mm	2 Stainless steel, curved, high-quality plastic tips	315-246	**23,-**
E1 - M3	≤ 5 g	136 mm	3 Stainless steel, straight, high quality plastic tips	315-247	**23,-**
E1 - M3	≤ 200 g	225 mm	4 Stainless steel, straight, high-quality plastic tips, with a special shape for gripping weights of various shapes and sizes	315-248	**38,-**
F2 – M3	1 mg – 200 g	100 mm	5 Stainless steel	335-240	**17,-**
E1 – M3	1 mg – 200 g	100 mm	6 Plastic	315-242	**8,-**

Weight grip
plastic coated

For class	For knob shaped weights	KERN	€
E1 - M3	2 kg	315-273	**35,-**
E1 - M3	5 kg	315-274	**40,-**
E1 - M3	10 kg	315-275	**45,-**
E1 - M3	20 kg	315-276	**68,-**

! not appropriate for cast iron weights

Gloves
Cotton, 1 pair. Help to protect the test weights when being used daily, from grease from fingers, damp etc.
Suitable for test weights up to 2 kg.

KERN	€
317-280	**2,50**

Gloves
Leather/cotton, 1 pair. Help to protect the test weights when being used daily, from grease from fingers, damp etc.
Ideal for test weights from 2 kg.

KERN	€
317-290	**6,90**

Premium gloves
Nylon, 1 pair.
Particularly elastic, one size fits all, with special fingertip coating to ensure a safe grip. Helps to protect the test weights in everyday use from grease from fingers, damp etc.
Ideal for all test weights.

KERN	€
317-281	**9,-**

Dusting brush
to clean the weights

KERN	€
318-270	**7,20**

Bellows
for cleaning weights

KERN	€
318-271	**9,60**

Microfibre cloth
for cleaning weights

KERN	€
318-272	**6,90**

17

Boxes for individual weights

For weights ≤ 500 g, OIML class E1 – F1

For weights ≥ 1 kg, OIML class E1 – F1

Case material: Wood, lined, suitable for single weights, KERN No. 307, 316, 317, 326, 327

For weights ≤ 500 g, OIML class F2 – M3

For weights ≥ 1 kg, OIML class F2 – M3

Case material: Wood, not lined, suitable for single weights, KERN No. 337, 347, 357, 367
! not suitable for cast iron weights

For test weights ≥ 10 kg, OIML class F1 – M1

Case material: Wood, lined/not lined, suitable for single weights, KERN No. 327, 337, 347
! not suitable for cast iron weights

Wooden box, lined
for single weights E1 – F1

For weights	KERN	€
-	-	-
1 g	317-010-100	**26,-**
2 g	317-020-100	**27,-**
5 g	317-030-100	**28,-**
10 g	317-040-100	**27,-**
20 g	317-050-100	**31,-**
50 g	317-060-100	**31,-**
100 g	317-070-100	**33,-**
200 g	317-080-100	**33,-**
500 g	317-090-100	**39,-**
1 kg	317-110-100	**63,-**
2 kg	317-120-100	**65,-**
5 kg	317-130-100	**99,-**
10 kg	317-140-100	**115,-**
20 kg	317-150-100	**630,-**
50 kg	317-160-100	**880,-**

Wooden box, not lined
for single weights F2 – M3

For weights	KERN	€
mg	338-090-200	**27,-**
1 g	337-010-200	**21,-**
2 g	337-020-200	**17,-**
5 g	337-030-200	**18,-**
10 g	337-040-200	**18,-**
20 g	337-050-200	**18,-**
50 g	337-060-200	**20,-**
100 g	337-070-200	**24,-**
200 g	337-080-200	**25,-**
500 g	337-090-200	**26,-**
1 kg	337-110-200	**42,-**
2 kg	337-120-200	**47,-**
5 kg	337-130-200	**78,-**
10 kg	337-140-200	**82,-**
20 kg	337-150-200	**390,-**
50 kg	337-160-200	**610,-**

Wooden box, not lined
for test weights F1 – M1

For weights	KERN	€
10 kg	337-141-200	**360,-**
20 kg	337-151-200	**390,-**
50 kg	337-161-200	**610,-**

Wooden box, lined
for test weights F1 – M1

For weights	KERN	€
10 kg	337-141-100	**340,-**
20 kg	337-151-100	**370,-**
50 kg	337-161-100	**570,-**

For weights ≤ 5 kg, OIML class E1 – M3

Case material: Aluminium protected, lined, suitable for mg and single weights, KERN No. 307, 308, 316, 317, 318, 326, 327, 328, 337, 338, 347, 348, 357, 367
! not suitable for cast iron weights

For weights ≤ 10 kg, OIML class E1 – M3

Case material: Aluminium protected, lined, suitable for single weights, KERN No. 307, 316, 317, 326, 327, 337, 347, 357, 367
! not suitable for cast iron weights

For block weight ≥ 5 kg, OIML class F1 – M3

Case material: Aluminium protected, lined, suitable for block weights, KERN No. 326, 336, 346, 356, 366

Aluminium protected box, lined
for individual weights, knob and compact shape, class E1 – M3

For weights	KERN	€
mg	317-009-600	**15,-**
1 g	317-010-600	**15,-**
2 g	317-020-600	**18,-**
5 g	317-030-600	**16,-**
10 g	317-040-600	**16,-**
20 g	317-050-600	**16,-**
50 g	317-060-600	**15,-**
100 g	317-070-600	**15,-**
200 g	317-080-600	**15,-**
500 g	317-090-600	**20,-**
1 kg	317-110-600	**28,-**
2 kg	317-120-600	**34,-**
5 kg	317-130-600	**56,-**

Aluminium protected box, lined
for individual weights, knob and compact shape, class E1 – M3

For weights	KERN	€
10 kg	317-140-600	**79,-**
20 kg	317-150-600	**111,-**
50 kg	317-160-600	**320,-**

Aluminium protected case, lined
for individual weights F1 – M3

For weights	KERN	€
5 kg	346-060-600	**84,-**
10 kg	346-070-600	**110,-**
20 kg	346-080-600	**160,-**
50 kg	346-090-600	**180,-**

Carrying cases/boxes for individual weight sets

Individual weight sets:
You can create your own “tailor-made” individual weight sets yourself. KERN will customise your own personal wooden box/plastic carrying case. The largest individual weight which will fit is given in the table.

Sample order:
Your individual weight set (class F1):
1 × 50 g, 2 × 100 g, 1 × 500 g, 2 × 1 kg, 1 × 2 kg.

The correct individual box is **KERN No. 313-080-400** (plastic) or **KERN No. 315-070-100** (wood, lined)

Plastic case
for individual weight sets classes E1 – M3,
not appropriate for cast iron weights

Largest possible weight	KERN	€
≤ 500 g	313-050-400	**166,-**
≤ 5 kg	313-080-400	**320,-**

Wooden case
lined, for individual weight sets classes E1 – F1
* with side handles

Largest possible weight	KERN	€
≤ 200 g	315-040-100	**245,-**
≤ 1 kg	315-060-100	**345,-**
≤ 2 kg	315-070-100	**425,-**
≤ 5 kg*	315-080-100	**540,-**
≤ 10 kg*	315-090-100	**560,-**

Wooden case not lined, for individual weight set classes F2 – M3, not appropriate for cast iron weights
* with side handles

Largest possible weight	KERN	€
≤ 200 g	335-040-200	**141,-**
≤ 500 g	335-050-200	**141,-**
≤ 1 kg	335-060-200	**200,-**
≤ 2 kg	335-070-200	**225,-**
≤ 5 kg*	335-080-200	**315,-**
≤ 10 kg*	335-090-200	**330,-**

Carrying cases for standard weight sets

Plastic case for weight sets
with standard denomination classes E1 – M3,
not appropriate for cast iron weights

Largest possible weight	KERN	€
≤ 500 g	313-052-400	**100,-**
≤ 5 kg	313-082-400	**205,-**

Fig. shows
313-010-600

Aluminium protected case for safe storage and transportation under harsh industrial conditions.

Aluminium protected case
for weight sets with standard denomination classes E1 – M2
*1 front handle; **2 side handles; ***no handle

For weights	For class	KERN	€
1 mg - 500 mg	E1 - M1	313-010-600*	**97,-**
1 mg - 50 g	E1 - M1	313-020-600*	**99,-**
1 mg - 100 g	E1 - M1	313-030-600*	**108,-**
1 mg - 200 g	E1 - M1	313-040-600*	**115,-**
1 mg - 500 g	E1 - M1	313-050-600*	**139,-**
1 mg - 1 kg	E1 - M1	313-060-600*	**169,-**
1 mg - 2 kg	E1 - M1	313-070-600**	**199,-**
1 mg - 5 kg	E1 - M1	313-080-600***	**265,-**
1 mg - 10 kg	E1 - M1	313-090-600***	**345,-**
1 g - 50 g	E1 - M2	314-020-600*	**94,-**
1 g - 100 g	E1 - M2	314-030-600*	**103,-**
1 g - 200 g	E1 - M2	314-040-600*	**110,-**
1 g - 500 g	E1 - M2	314-050-600*	**134,-**
1 g - 1 kg	E1 - M2	314-060-600*	**164,-**
1 g - 2 kg	E1 - M2	314-070-600*	**194,-**
1 g - 5 kg	E1 - M2	314-080-600***	**260,-**
1 g - 10 kg	E1 - M2	314-090-600***	**345,-**

Weight containers for rectangular weights or other test weights, stainless steel glass bead blasted, adjusted to OIML class M1

Preconfigured weight containers for testing high-load floor scales, pallet scales, pallet truck scales, crane scales, etc. This can also be used for storing the weights. This means the weight container and the weights can be placed on the balance in one go, saving you time and money. The weight container is adjusted to OIML accuracy class M1. Other OIML accuracy classes are also available, please ask.

Weight of the weight container, OIML class M1	Tol +/- g	Possible equipment, rectangular weights, OIML class M1	Maximum total weight (weight container incl. weights)	Price (weight container excluding weights)	
				KERN	€
20 kg	1,0	5 × 20 kg	120 kg	346-022-005	**1690,-**
40 kg	1,5	8 × 20 kg	200 kg	346-042-008	**2180,-**
50 kg	2,5	10 × 20 kg	250 kg	346-052-010	**2180,-**
50 kg	2,5	4 × 50 kg	250 kg	346-055-004	**2180,-**
50 kg	2,5	9 × 50 kg	500 kg	346-055-009	**2180,-**
60 kg	3,0	8 × 50 kg and 2 × 20 kg	500 kg	346-065-009	**2370,-**

Weight of the weight container, OIML class M1	Tol +/- g	Possible equipment, test weights, OIML class M1	Maximum total weight (weight container incl. weights)	Price (weight container excluding weights)	
				KERN	€
20 kg	1,0	max. 10 × 10 kg or 5 × 20 kg	120 kg	347-022-005	**1690,-**
40 kg	2,0	max. 16 × 10 kg or 8 × 20 kg	200 kg	347-042-008	**1990,-**
50 kg	2,5	max. 20 × 10 kg or 10 × 20 kg	250 kg	347-052-010	**2180,-**
60 kg	3,0	max. 22 × 20 kg	500 kg	347-062-022	**2370,-**

Individual weight containers for rectangular weights or other test weights, calibrated to OIML class M1

Individual weight carriers for testing high capacity floor scales, pallet scales, pallet truck scales, crane scales, etc. This can also be used for storing the weights. This means the weight container and the weights can be placed on the scale in one go, saving time and money.

The weight container can be calibrated to OIML accuracy classes M1 – M3.
On request, KERN will make you a “tailor-made” weight carrier to your specifications.

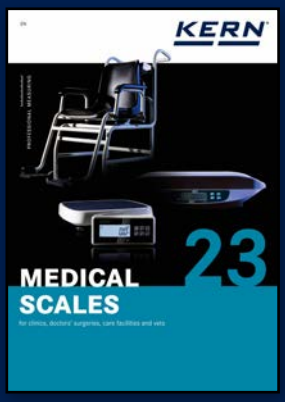
Example:

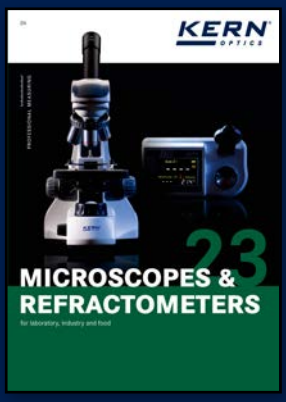
3 block weights	each 50 kg, class M1	=	150 kg
1 weight container	each 50 kg, class M1	=	50 kg
Total		=	200 kg

Weight of the weight container, OIML class M1	Price	
	KERN	€
Individual weight container for rectangular weights	346-000-000	Price on request
Individual weight container for test weights	347-000-000	Price on request

Example illustration

ASSORTMENT RANGE LEADER AND HIDDEN CHAMPION IN THE REGION: KERN WEIGHING & MEASURING TECHNOLOGY





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Printed in Germany by KERN & SOHN GmbH · z-cb-en-kp-20231

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