

Selection of the appropriate test weight for your balance	166
OIML norm for weights	167
Composition table for weight sets	167
CLASS E1	168
Milligram weights, individual weights, weight sets	
CLASS E2	169
Milligram weights, individual weights, weight sets	
CLASS F1	171
Milligram weights, individual weights, weight sets	
CLASS F2	175
Milligram weights, individual weights, test weights, weight sets	
CLASS M1	177
Milligram weights, individual weights, test weights, weight sets	
CLASS M1	179
Hook weights, slotted weights, beam bars, block weights, heavy duty weights	
CLASS M2	181
Individual weights, block weights, weight sets	
CLASS M3	182
Individual weights, cylindrical weights, block weights, weight sets	
ACCESSORIES	183
Test weight accessories, tweezers, gloves, dusting brush, custom-made special boxes, weight carrying cases, weight carriers	

Weights yesterday and today

Weights have always been used to carry out weighing procedures. This original purpose has almost disappeared. Today, weights are used almost exclusively for adjusting and testing = calibration of electronic balances. We therefore call them "Test weights" as this is their purpose of use.

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 appropriate test weight is only classed as checking equipment according to → **ISO 9000ff** if it has the relevant proof of accuracy, all KERN test weights come with an appropriate → **DAkkS-calibration certificate**. For further details, see the calibration service section on page 185.

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 pre-requisite for proper balance calibration.

→ See the glossary on page 191 – 192

Test weights: classes of accuracy 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 $\geq 100,000$ e
- F1 Test weights for analytical balances / precision balances for verification class I / II $\leq 100,000$ e
- F2 Test weights for precision balances of verification class II, $\leq 30,000$ e
- M1 Test weights for industrial and commercial scales of verification class III $\leq 10,000$ e

Your KERN product specialist will be happy to help:



Marietta Diener

Product specialist Test weights

Tel. +49 [0] 7433 9933-167

Fax +49 [0] 7433 9933-29167

diener@kern-sohn.com

Selection of the appropriate test weight for your balance

Correctly selected test weights with DAkkS calibration certificate are the pre-requisite for ensuring that your balances are not only correctly adjusted, but also correctly calibrated. Scheduled testing of your balances with such test weights helps to guarantee your quality requirements and to maintain your quality targets.

Here's how you find the right test weight for your balance:

A balance can never be more accurate than the test weight used to adjust it, it all depends on its tolerance.

Accuracy of the test weight: Should correspond to the readout [d] of the balance, or rather be better.

Nominal weight value: This 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 167.

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] with approx. ± 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 327-72, see page 172.

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 brass to stainless steel - the right test weight for every situation



Test weight →	Cylindrical shape with lifting knob, polished stainless steel	Compact shape with carrying grip, polished stainless steel	Cylindrical shape with lifting knob, polished stainless steel or nickelplated and polished brass	Compact shape with carrying grip, finely turned stainless steel	Cylindrical shape with lifting knob, finely turned stainless steel	Cylindrical shape with lifting knob, finely turned brass
Features ↓						
conforms to OIML R111	yes	yes	yes	no	yes	yes
Available classes	E1, E2	E2, F1	F1	adjusted to F1 error limit class	F2, M1	M1, M2, M3
Upper surface	polished	polished	polished	finely turned	finely turned	finely turned
Material	Stainless steel	Stainless steel	Stainless steel or nickel-plated brass	Stainless steel	Stainless steel	Brass
Adjusting cavity	no	no	yes	yes, from 20 g	yes, from 20 g	yes, from 20 g
Verification possible	yes	yes	yes	nein	yes	yes, except M2
Checking equipment for verification purposes	approved	approved	approved	not approved	approved	approved
Ideal as checking equipment in QM systems (e.g. ISO 9000 ff)	yes	yes	yes	yes	yes	yes
Benefits	<ul style="list-style-type: none">High-quality test weight for analytical and precision balancesHighly-refined surfaceIdeal shape of the top for good grip	<ul style="list-style-type: none">Affordable test weight for analytical and precision balancesHighly-refined surface	<ul style="list-style-type: none">Ideal, high-quality test weight for precision balancesIdeal shape of the top for good grip	<ul style="list-style-type: none">Affordable test weight for in-house checking of precision balances	<ul style="list-style-type: none">Ideal test weight for commercial and industrial scalesIdeal shape of the top for good grip	<ul style="list-style-type: none">Affordable test weight for commercial and industrial scalesIdeal shape of the top for good grip

OIML norm R111-2004 for weights

The key points from the OIML norm R111-2004

OIML (Organisation Internationale de Metrologie Legale) 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 – 50 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 $\pm \dots$ 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, i.e. 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 cylindrical test weights

Comply with OIML R111-2004 in all respects, without exception.

→ See the glossary, page 191 – 192

Nominal value ↓	OIML R111-2004 Maximum permissible errors for weights = permissible tolerances "Tol \pm mg"						
	E1	E2	F1	F2	M1	M2	M3
1 mg	$\pm 0,003$ mg	$\pm 0,006$ mg	$\pm 0,020$ mg	$\pm 0,06$ mg	$\pm 0,20$ mg	-	-
2 mg	$\pm 0,003$ mg	$\pm 0,006$ mg	$\pm 0,020$ mg	$\pm 0,06$ mg	$\pm 0,20$ mg	-	-
5 mg	$\pm 0,003$ mg	$\pm 0,006$ mg	$\pm 0,020$ mg	$\pm 0,06$ mg	$\pm 0,20$ mg	-	-
10 mg	$\pm 0,003$ mg	$\pm 0,008$ mg	$\pm 0,025$ mg	$\pm 0,08$ mg	$\pm 0,25$ mg	-	-
20 mg	$\pm 0,003$ mg	$\pm 0,010$ mg	$\pm 0,03$ mg	$\pm 0,10$ mg	$\pm 0,3$ mg	-	-
50 mg	$\pm 0,004$ mg	$\pm 0,012$ mg	$\pm 0,04$ mg	$\pm 0,12$ mg	$\pm 0,4$ mg	-	-
100 mg	$\pm 0,005$ mg	$\pm 0,016$ mg	$\pm 0,05$ mg	$\pm 0,16$ mg	$\pm 0,5$ mg	$\pm 1,6$ mg	-
200 mg	$\pm 0,006$ mg	$\pm 0,020$ mg	$\pm 0,06$ mg	$\pm 0,20$ mg	$\pm 0,6$ mg	$\pm 2,0$ mg	-
500 mg	$\pm 0,008$ mg	$\pm 0,025$ mg	$\pm 0,08$ mg	$\pm 0,25$ mg	$\pm 0,8$ mg	$\pm 2,5$ mg	-
1 g	$\pm 0,010$ mg	$\pm 0,03$ mg	$\pm 0,10$ mg	$\pm 0,3$ mg	$\pm 1,0$ mg	$\pm 3,0$ mg	± 10 mg
2 g	$\pm 0,012$ mg	$\pm 0,04$ mg	$\pm 0,12$ mg	$\pm 0,4$ mg	$\pm 1,2$ mg	$\pm 4,0$ mg	± 12 mg
5 g	$\pm 0,016$ mg	$\pm 0,05$ mg	$\pm 0,16$ mg	$\pm 0,5$ mg	$\pm 1,6$ mg	$\pm 5,0$ mg	± 16 mg
10 g	$\pm 0,020$ mg	$\pm 0,06$ mg	$\pm 0,20$ mg	$\pm 0,6$ mg	$\pm 2,0$ mg	$\pm 6,0$ mg	± 20 mg
20 g	$\pm 0,025$ mg	$\pm 0,08$ mg	$\pm 0,25$ mg	$\pm 0,8$ mg	$\pm 2,5$ mg	$\pm 8,0$ mg	± 25 mg
50 g	$\pm 0,03$ mg	$\pm 0,10$ mg	$\pm 0,3$ mg	$\pm 1,0$ mg	$\pm 3,0$ mg	± 10 mg	± 30 mg
100 g	$\pm 0,05$ mg	$\pm 0,16$ mg	$\pm 0,5$ mg	$\pm 1,6$ mg	$\pm 5,0$ mg	± 16 mg	± 50 mg
200 g	$\pm 0,10$ mg	$\pm 0,3$ mg	$\pm 1,0$ mg	$\pm 3,0$ mg	± 10 mg	± 30 mg	± 100 mg
500 g	$\pm 0,25$ mg	$\pm 0,8$ mg	$\pm 2,5$ mg	$\pm 8,0$ mg	± 25 mg	± 80 mg	± 250 mg
1 kg	$\pm 0,5$ mg	$\pm 1,6$ mg	$\pm 5,0$ mg	± 16 mg	± 50 mg	± 160 mg	± 500 mg
2 kg	$\pm 1,0$ mg	$\pm 3,0$ mg	± 10 mg	± 30 mg	± 100 mg	± 300 mg	± 1000 mg
5 kg	$\pm 2,5$ mg	$\pm 8,0$ mg	± 25 mg	± 80 mg	± 250 mg	± 800 mg	± 2500 mg
10 kg	$\pm 5,0$ mg	± 16 mg	± 50 mg	± 160 mg	± 500 mg	± 1600 mg	± 5000 mg
20 kg	± 10 mg	± 30 mg	± 100 mg	± 300 mg	± 1000 mg	± 3000 mg	± 10 g
50 kg	± 25 mg	± 80 mg	± 250 mg	± 800 mg	± 2500 mg	± 8000 mg	± 25 g
100 kg	-	± 160 mg	± 500 mg	± 1600 mg	± 5000 mg	± 16 g	± 50 g
200 kg	-	± 300 mg	± 1000 mg	± 3000 mg	± 10 g	± 30 g	± 100 g
500 kg	-	± 800 mg	± 2500 mg	± 8000 mg	± 25 g	± 80 g	± 250 g
1 000 kg	-	± 1600 mg	± 5000 mg	± 16000 mg	± 50 g	± 160 g	± 500 g
2 000 kg	-	-	± 10 g	± 30 g	± 100 g	± 300 g	± 1000 g
5 000 kg	-	-	± 25 g	± 80 g	± 250 g	± 800 g	± 2500 g

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

Individual weights per 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		
	△	□	□	△	□	□	□	△	□	□	□	□	1	2	2	5	10	20	20	50	100	200	200	500	1	2	2	5	10		
Weight set ↓	mg	mg	mg	mg	mg	mg	mg	mg	mg	mg	mg	mg	g	g	g	g	g	g	g	g	g	g	g	g	kg	kg	kg	kg	kg		
1 mg – 500 mg	Total weight												1,11 g																		
1 mg – 50 g																															
1 mg – 100 g																															
1 mg – 200 g																															
1 mg – 500 g																															
1 mg – 1 kg																															
1 mg – 2 kg																															
1 mg – 5 kg																															
1 mg – 10 kg																															

Test weights class E1

Class E1 Milligram weights, wire shape, stainless steel

Test weight material: stainless steel
Box material: Wood



Milligram weight			+ Box	+ DAkkS certificate	= Package price		
KERN		Tol ± mg	KERN	€	KERN	€	
308-31	1 mg	0,003	52,-	338-090-200	14,-	962-251	50,-
308-32	2 mg	0,003	52,-	338-090-200	14,-	962-252	50,-
308-33	5 mg	0,003	52,-	338-090-200	14,-	962-253	50,-
308-34	10 mg	0,003	52,-	338-090-200	14,-	962-254	50,-
308-35	20 mg	0,003	52,-	338-090-200	14,-	962-255	50,-
308-36	50 mg	0,004	52,-	338-090-200	14,-	962-256	50,-
308-37	100 mg	0,005	52,-	338-090-200	14,-	962-257	50,-
308-38	200 mg	0,006	52,-	338-090-200	14,-	962-258	50,-
308-39	500 mg	0,008	52,-	338-090-200	14,-	962-259	50,-

Class E1 Individual weights, cylindrical shape, polished stainless steel

Test weight material: Polished stainless steel
Box material: Lined wood



For weights
≤ 500 g

For weights
≥ 1 kg

Individual weight			+ Box	+ DAkkS certificate	= Package price	DAkkS certificate Recalibration	
KERN		Tol ± mg	KERN	€	KERN	€	
307-01	1 g	0,010	83,-	317-010-100	28,-	962-231	302,-
307-02	2 g	0,012	89,-	317-020-100	28,-	962-232	308,-
307-03	5 g	0,016	96,-	317-030-100	28,-	962-233	315,-
307-04	10 g	0,020	104,-	317-040-100	28,-	962-234	323,-
307-05	20 g	0,025	113,-	317-050-100	28,-	962-235	332,-
307-06	50 g	0,03	135,-	317-060-100	28,-	962-236	354,-
307-07	100 g	0,05	162,-	317-070-100	28,-	962-237	381,-
307-08	200 g	0,10	194,-	317-080-100	28,-	962-238	413,-
307-09	500 g	0,25	280,-	317-090-100	31,-	962-239	502,-
307-11	1 kg	0,5	425,-	317-110-100	35,-	962-241	651,-
307-12	2 kg	1,0	630,-	317-120-100	44,-	962-242	1139,-
307-13	5 kg	2,5	1060,-	317-130-100	66,-	962-243	1591,-
307-14	10 kg	5,0	1530,-	317-140-100	89,-	962-244	2084,-
307-15	20 kg	10,0	2160,-	317-150-100	340,-	962-245	3600,-
307-16	50 kg	25,0	4140,-	317-160-100	415,-	962-246	5855,-

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, cylindrical shape, polished stainless steel

Test weight material: Polished stainless steel Case material: Lined wood



Weight set		+ DAkkS certificate	= Package price	DAkkS certificate Recalibration
KERN		Initial calibration	KERN	€
308-42	1 mg - 500 mg	655,-	962-250	335,-
303-02	1 mg - 50 g	1540,-	963-201	2600,-
303-03	1 mg - 100 g	1700,-	963-202	2860,-
303-04	1 mg - 200 g	2090,-	963-203	3430,-
303-05	1 mg - 500 g	2420,-	963-204	3850,-
303-06	1 mg - 1 kg	2840,-	963-205	4360,-
303-07	1 mg - 2 kg	4150,-	963-206	6130,-
303-08	1 mg - 5 kg	5300,-	963-207	7730,-
303-09	1 mg - 10 kg	6890,-	963-208	9760,-
304-02	1 g - 50 g	910,-	963-215	1670,-
304-03	1 g - 100 g	1070,-	963-216	1920,-
304-04	1 g - 200 g	1460,-	963-217	2490,-
304-05	1 g - 500 g	1790,-	963-218	2910,-
304-06	1 g - 1 kg	2210,-	963-219	3430,-
304-07	1 g - 2 kg	3520,-	963-220	5280,-
304-08	1 g - 5 kg	4670,-	963-221	6880,-
304-09	1 g - 10 kg	6260,-	963-222	8920,-

Test weights class E2

Class E2 Milligram weights, flat polygonal sheet, aluminium / German silver

Test weight material: Aluminium 1 mg – 5 mg / German silver 10 mg – 500 mg
 Container material: Lined plastic



Milligram weight			Container		DAkkS certificate		Package price	
KERN		Tol ± mg	€		KERN	€	KERN	€
318-01	1 mg	0,006	24,-		347-009-400	2,-	962-351	24,-
318-02	2 mg	0,006	24,-		347-009-400	2,-	962-352	24,-
318-03	5 mg	0,006	24,-		347-009-400	2,-	962-353	24,-
318-04	10 mg	0,008	24,-		347-009-400	2,-	962-354	24,-
318-05	20 mg	0,010	24,-		347-009-400	2,-	962-355	24,-
318-06	50 mg	0,012	24,-		347-009-400	2,-	962-356	24,-
318-07	100 mg	0,016	24,-		347-009-400	2,-	962-357	24,-
318-08	200 mg	0,020	24,-		347-009-400	2,-	962-358	24,-
318-09	500 mg	0,025	24,-		347-009-400	2,-	962-359	24,-

Class E2 Individual weights, compact shape, polished stainless steel

Test weight material: Polished stainless steel
 Container material: Lined plastic



Individual weight			Container		DAkkS certificate		Package price	
KERN		Tol ± mg	€		KERN	€	KERN	€
316-01	1 g	0,03	33,-		317-020-400	6,-	962-331	24,-
316-02	2 g	0,04	35,-		317-020-400	6,-	962-332	24,-
316-03	5 g	0,05	37,-		317-030-400	6,-	962-333	24,-
316-04	10 g	0,06	39,-		317-040-400	6,-	962-334	24,-
316-05	20 g	0,08	45,-		317-050-400	6,-	962-335	24,-
316-06	50 g	0,10	48,-		317-060-400	6,-	962-336	24,-
316-07	100 g	0,16	52,-		317-070-400	6,-	962-337	31,-
316-08	200 g	0,3	66,-		317-080-400	6,-	962-338	31,-
316-09	500 g	0,8	111,-		317-090-400	9,-	962-339	31,-
316-11	1 kg	1,6	161,-		317-110-400	9,-	962-341	31,-
316-12	2 kg	3,0	260,-		317-120-400	9,-	962-342	39,-
316-13	5 kg	8,0	375,-		317-130-400	15,-	962-343	39,-
316-14	10 kg	16,0	530,-		317-140-400	20,-	962-344	39,-

Class E2 Individual weights, cylindrical shape, polished stainless steel

Test weight material: Polished stainless steel
 Container material: Lined plastic or wooden box (317-150-100 and 317-160-100)



Individual weight			Container		DAkkS certificate		Package price	
KERN		Tol ± mg	€		KERN	€	KERN	€
317-01	1 g	0,03	47,-		317-020-400	6,-	962-331	24,-
317-02	2 g	0,04	50,-		317-020-400	6,-	962-332	24,-
317-03	5 g	0,05	54,-		317-030-400	6,-	962-333	24,-
317-04	10 g	0,06	56,-		317-040-400	6,-	962-334	24,-
317-05	20 g	0,08	65,-		317-050-400	6,-	962-335	24,-
317-06	50 g	0,10	76,-		317-060-400	6,-	962-336	24,-
317-07	100 g	0,16	82,-		317-070-400	6,-	962-337	31,-
317-08	200 g	0,3	104,-		317-080-400	6,-	962-338	31,-
317-09	500 g	0,8	175,-		317-090-400	9,-	962-339	31,-
317-11	1 kg	1,6	260,-		317-110-400	9,-	962-341	31,-
317-12	2 kg	3,0	415,-		317-120-400	9,-	962-342	39,-
317-13	5 kg	8,0	590,-		317-130-400	15,-	962-343	39,-
317-14	10 kg	16,0	850,-		317-140-400	20,-	962-344	39,-
317-15	20 kg	30,0	1340,-		317-150-100	340,-	962-345	50,-
317-16	50 kg	80,0	2780,-		317-160-100	415,-	962-346	62,-

For individual weights, wooden boxes are also available as an alternative to the plastic containers.
 For more details on this, please see page 183.

For weights
 ≤ 500 g

For weights
 ≥ 1 kg

Test weights class E2

Class E2 Weight sets, compact shape, polished stainless steel



Test weight material: Polished stainless steel

Case material: Lined plastic

Weight set		+ DAkkS certificate	= Package price
KERN	€	KERN	€
312-024	1 g - 50 g	370,-	490,-
312-034	1 g - 100 g	410,-	552,-
312-044	1 g - 200 g	500,-	686,-
312-054	1 g - 500 g	610,-	818,-
312-064	1 g - 1 kg	810,-	1040,-
312-074	1 g - 2 kg	1310,-	1600,-
312-084	1 g - 5 kg	1650,-	1970,-

Class E2 Weight sets, cylindrical shape, polished stainless steel

Test weight material: Individual weights, polished stainless steel, milligram weights aluminium / German silver

Case material: Lined plastic. Milligram weights 1mg – 500 mg in removable plastic box



Weight set		+ DAkkS certificate	= Package price
KERN	€	KERN	€
318-22	1 mg - 500 mg	320,-	500,-
313-024	1 mg - 50 g	820,-	1120,-
313-034	1 mg - 100 g	910,-	1232,-
313-044	1 mg - 200 g	1110,-	1476,-
313-054	1 mg - 500 g	1270,-	1658,-
313-064	1 mg - 1 kg	1630,-	2040,-
313-074	1 mg - 2 kg	2460,-	2930,-
313-084	1 mg - 5 kg	3050,-	3550,-
314-024	1 g - 50 g	540,-	660,-
314-034	1 g - 100 g	620,-	762,-
314-044	1 g - 200 g	830,-	1016,-
314-054	1 g - 500 g	1010,-	1218,-
314-064	1 g - 1 kg	1340,-	1570,-
314-074	1 g - 2 kg	2180,-	2470,-
314-084	1 g - 5 kg	2760,-	3080,-

Class E2 Weight sets, cylindrical shape, polished stainless steel

Test weight material: Individual weights, polished stainless steel, milligram weights aluminium / German silver

Case material: Lined wood. Milligram weights 1mg – 500 mg in removable plastic box



Weight set		+ DAkkS certificate	= Package price
KERN	€	KERN	€
318-22	1 mg - 500 mg	320,-	500,-
313-02	1 mg - 50 g	880,-	1180,-
313-03	1 mg - 100 g	960,-	1222,-
313-04	1 mg - 200 g	1170,-	1536,-
313-05	1 mg - 500 g	1400,-	1788,-
313-06	1 mg - 1 kg	1670,-	2080,-
313-07	1 mg - 2 kg	2550,-	3120,-
313-08	1 mg - 5 kg	3250,-	3750,-
313-09	1 mg - 10 kg	4180,-	4710,-
314-02	1 g - 50 g	590,-	710,-
314-03	1 g - 100 g	670,-	812,-
314-04	1 g - 200 g	880,-	1066,-
314-05	1 g - 500 g	1120,-	1328,-
314-06	1 g - 1 kg	1380,-	1610,-
314-07	1 g - 2 kg	2260,-	2550,-
314-08	1 g - 5 kg	2960,-	3380,-
314-09	1 g - 10 kg	3890,-	4240,-

Test weights class F1

Class F1 Milligram weights, flat polygonal sheet, aluminium / German silver

Test weight material: Aluminium 1 mg - 5 mg / German silver 10 mg - 500 mg
 Container material: Lined plastic



Milligram weight			Container		DAkkS certificate		Package price	
KERN		Tol ± mg	€		KERN	€	KERN	€
328-01	1 mg	0,020	11,-		347-009-400	2,-	962-451	17,-
328-02	2 mg	0,020	11,-		347-009-400	2,-	962-452	17,-
328-03	5 mg	0,020	11,-		347-009-400	2,-	962-453	17,-
328-04	10 mg	0,025	11,-		347-009-400	2,-	962-454	17,-
328-05	20 mg	0,03	11,-		347-009-400	2,-	962-455	17,-
328-06	50 mg	0,04	11,-		347-009-400	2,-	962-456	17,-
328-07	100 mg	0,05	11,-		347-009-400	2,-	962-457	17,-
328-08	200 mg	0,06	11,-		347-009-400	2,-	962-458	17,-
328-09	500 mg	0,08	11,-		347-009-400	2,-	962-459	17,-

Individual weights, compact shape, finely turned stainless steel

Test weight material: finely turned stainless steel
 Container material: Lined plastic

■ Build type: Not in accordance with OIML R111, adjusted to error limit class F1



Individual weight			Container		DAkkS certificate		Package price	
KERN		Tol ± mg	€		KERN	€	KERN	€
329-01	1 g	0,10	18,-		347-030-400	2,-	962-431N	17,-
329-02	2 g	0,12	19,-		347-030-400	2,-	962-432N	17,-
329-03	5 g	0,16	20,-		347-030-400	2,-	962-433N	17,-
329-04	10 g	0,20	23,-		347-050-400	2,-	962-434N	17,-
329-05	20 g	0,25	25,-		347-050-400	2,-	962-435N	17,-
329-06	50 g	0,3	27,-		347-070-400	2,-	962-436N	17,-
329-07	100 g	0,5	31,-		347-070-400	2,-	962-437N	19,-
329-08	200 g	1,0	41,-		347-080-400	2,-	962-438N	19,-
329-09	500 g	2,5	58,-		347-090-400	3,-	962-439N	19,-
329-11	1 kg	5,0	83,-		347-110-400	3,-	962-441N	19,-
329-12	2 kg	10	127,-		347-120-400	3,-	962-442N	24,-
329-13	5 kg	25	218,-		347-130-400	9,-	962-443N	24,-
329-14	10 kg	50	412,-		347-140-400	9,-	962-444N	24,-

Class F1 Individual weights, compact shape, polished stainless steel

Test weight material: Polished stainless steel
 Container material: Lined plastic



Individual weight			Container		DAkkS certificate		Package price	
KERN		Tol ± mg	€		KERN	€	KERN	€
326-01	1 g	0,10	22,-		347-030-400	2,-	962-431	17,-
326-02	2 g	0,12	23,-		347-030-400	2,-	962-432	17,-
326-03	5 g	0,16	25,-		347-030-400	2,-	962-433	17,-
326-04	10 g	0,20	28,-		347-050-400	2,-	962-434	17,-
326-05	20 g	0,25	29,-		347-050-400	2,-	962-435	17,-
326-06	50 g	0,3	32,-		347-070-400	2,-	962-436	17,-
326-07	100 g	0,5	36,-		347-070-400	2,-	962-437	19,-
326-08	200 g	1,0	49,-		347-080-400	2,-	962-438	19,-
326-09	500 g	2,5	68,-		347-090-400	3,-	962-439	19,-
326-11	1 kg	5,0	101,-		347-110-400	3,-	962-441	19,-
326-12	2 kg	10	150,-		347-120-400	3,-	962-442	24,-
326-13	5 kg	25	257,-		347-130-400	9,-	962-443	24,-
326-14	10 kg	50	485,-		347-140-400	9,-	962-444	24,-

Test weights class F1

Class F1 Individual weights, cylindrical shape, nickel-plated and polished brass

Test weight material: Nickel-plated and polished brass

Container material: Lined plastic or lined wooden box (317-150-100 and 317-160-100)



Individual weight			+ Container	+ DAkkS certificate	= Package price		
KERN	Tol ± mg	€	KERN	€	KERN	€	
327-61	1 g	0,10	23,-	347-030-400	2,-	962-431	17,-
327-62	2 g	0,12	24,-	347-030-400	2,-	962-432	17,-
327-63	5 g	0,16	26,-	347-030-400	2,-	962-433	17,-
327-64	10 g	0,20	29,-	347-050-400	2,-	962-434	17,-
327-65	20 g	0,25	31,-	347-050-400	2,-	962-435	17,-
327-66	50 g	0,3	34,-	347-070-400	2,-	962-436	17,-
327-67	100 g	0,5	38,-	347-070-400	2,-	962-437	19,-
327-68	200 g	1,0	52,-	347-080-400	2,-	962-438	19,-
327-69	500 g	2,5	72,-	347-090-400	3,-	962-439	19,-
327-71	1 kg	5,0	106,-	347-110-400	3,-	962-441	19,-
327-72	2 kg	10	158,-	347-120-400	3,-	962-442	24,-
327-73	5 kg	25	270,-	347-130-400	9,-	962-443	24,-
327-74	10 kg	50	510,-	347-140-400	9,-	962-444	24,-
327-75	20 kg	100	960,-	317-150-100	340,-	962-445	27,-
327-76	50 kg	250	1800,-	317-160-100	415,-	962-446	38,-

Class F1 Individual weights, cylindrical shape, polished stainless steel

Test weight material: Polished stainless steel

Container material: Lined plastic or lined wooden box (317-150-100 and 317-160-100)



Individual weight			+ Container	+ DAkkS certificate	= Package price		
KERN	Tol ± mg	€	KERN	€	KERN	€	
327-01	1 g	0,10	30,-	347-030-400	2,-	962-431	17,-
327-02	2 g	0,12	31,-	347-030-400	2,-	962-432	17,-
327-03	5 g	0,16	33,-	347-030-400	2,-	962-433	17,-
327-04	10 g	0,20	37,-	347-050-400	2,-	962-434	17,-
327-05	20 g	0,25	41,-	347-050-400	2,-	962-435	17,-
327-06	50 g	0,3	45,-	347-070-400	2,-	962-436	17,-
327-07	100 g	0,5	55,-	347-070-400	2,-	962-437	19,-
327-08	200 g	1,0	72,-	347-080-400	2,-	962-438	19,-
327-09	500 g	2,5	118,-	347-090-400	3,-	962-439	19,-
327-11	1 kg	5,0	165,-	347-110-400	3,-	962-441	19,-
327-12	2 kg	10	250,-	347-120-400	3,-	962-442	24,-
327-13	5 kg	25	375,-	347-130-400	9,-	962-443	24,-
327-14	10 kg	50	680,-	347-140-400	9,-	962-444	24,-
327-15	20 kg	100	1050,-	317-150-100	340,-	962-445	27,-
327-16	50 kg	250	2270,-	317-160-100	415,-	962-446	38,-



Alternative to plastic container:

Wooden boxes for individual weights. For more details on this, please see page 183

Test weights class F1

Weight sets, compact shape, finely turned stainless steel



Check weight material: finely turned stainless steel, Case material: Lined plastic

Build type: Not in accordance with OIML R111, adjusted to error limit class F1

Weight set		+	DAkkS certificate		=	Package price	
KERN		€	KERN	€		KERN	€
321-024	1 g - 50 g	185,-	962-415	64,-		249,-	
321-034	1 g - 100 g	215,-	962-416	74,-		289,-	
321-044	1 g - 200 g	280,-	962-417	94,-		374,-	
321-054	1 g - 500 g	320,-	962-418	104,-		424,-	
321-064	1 g - 1 kg	460,-	962-419	114,-		574,-	
321-074	1 g - 2 kg	640,-	962-420	144,-		784,-	
321-084	1 g - 5 kg	820,-	962-421	159,-		979,-	

Class F1 Weight sets, compact shape, polished stainless steel

Test weight material: Polished stainless steel

Case material: Lined plastic



Weight set		+	DAkkS certificate		=	Package price	
KERN		€	KERN	€		KERN	€
322-024	1 g - 50 g	235,-	962-415	64,-		299,-	
322-034	1 g - 100 g	270,-	962-416	74,-		344,-	
322-044	1 g - 200 g	350,-	962-417	94,-		444,-	
322-054	1 g - 500 g	410,-	962-418	104,-		514,-	
322-064	1 g - 1 kg	580,-	962-419	114,-		694,-	
322-074	1 g - 2 kg	810,-	962-420	144,-		954,-	
322-084	1 g - 5 kg	1030,-	962-421	159,-		1189,-	

Class F1 Weight sets, cylindrical shape, polished and nickel-plated brass or polished stainless steel

Test weight material: Individual weights - nickel-plated and polished brass or polished stainless steel, milligram weights - aluminium 1 mg - 5 mg / German silver 10 mg - 500 mg

Case material: Lined plastic. Milligram weights 1 mg - 500 mg in removable plastic box



Weight set		+	DAkkS certificate		=	Package price	
KERN		€	KERN	€		KERN	€
328-22	1 mg - 500 mg	175,-	962-450	96,-		271,-	
Nickel-plated and polished brass							
323-624	1 mg - 50 g	400,-	962-401	160,-		560,-	
323-634	1 mg - 100 g	435,-	962-402	170,-		605,-	
323-644	1 mg - 200 g	530,-	962-403	190,-		720,-	
323-654	1 mg - 500 g	590,-	962-404	200,-		790,-	
323-664	1 mg - 1 kg	750,-	962-405	210,-		960,-	
323-674	1 mg - 2 kg	1030,-	962-406	240,-		1270,-	
323-684	1 mg - 5 kg	1270,-	962-407	255,-		1525,-	
324-624	1 g - 50 g	260,-	962-415	64,-		324,-	
324-634	1 g - 100 g	300,-	962-416	74,-		374,-	
324-644	1 g - 200 g	380,-	962-417	94,-		474,-	
324-654	1 g - 500 g	450,-	962-418	104,-		554,-	
324-664	1 g - 1 kg	630,-	962-419	114,-		744,-	
324-674	1 g - 2 kg	900,-	962-420	144,-		1044,-	
324-684	1 g - 5 kg	1140,-	962-421	159,-		1299,-	
Polished stainless steel							
323-024	1 mg - 50 g	500,-	962-401	160,-		660,-	
323-034	1 mg - 100 g	560,-	962-402	170,-		730,-	
323-044	1 mg - 200 g	700,-	962-403	190,-		890,-	
323-054	1 mg - 500 g	820,-	962-404	200,-		1020,-	
323-064	1 mg - 1 kg	1070,-	962-405	210,-		1280,-	
323-074	1 mg - 2 kg	1570,-	962-406	240,-		1810,-	
323-084	1 mg - 5 kg	1920,-	962-407	255,-		2175,-	
324-024	1 g - 50 g	340,-	962-415	64,-		404,-	
324-034	1 g - 100 g	400,-	962-416	74,-		474,-	
324-044	1 g - 200 g	540,-	962-417	94,-		634,-	
324-054	1 g - 500 g	660,-	962-418	104,-		764,-	
324-064	1 g - 1 kg	890,-	962-419	114,-		1004,-	
324-074	1 g - 2 kg	1400,-	962-420	144,-		1544,-	
324-084	1 g - 5 kg	1750,-	962-421	159,-		1909,-	

Test weights class F1

Class F1 Weight sets, cylindrical shape, nickel-plated and polished brass or polished stainless steel

Test weight material: Individual weights polished or nickel-plated brass or polished stainless steel, milligram weights aluminium 1 mg – 5 mg / German silver 10 mg – 500 mg

Case material: Lined wood. Milligram weights 1 mg – 500 mg in removable plastic box



Weight set		DAkkS certificate		Package price
KERN	€	KERN	€	KERN €
328-22	1 mg – 500 mg	175,-	96,-	271,-
Polished and nickel-plated brass				
323-62	1 mg – 50 g	455,-	962-401	615,-
323-63	1 mg – 100 g	485,-	962-402	655,-
323-64	1 mg – 200 g	580,-	962-403	770,-
323-65	1 mg – 500 g	700,-	962-404	900,-
323-66	1 mg – 1 kg	790,-	962-405	1000,-
323-67	1 mg – 2 kg	1120,-	962-406	1360,-
323-68	1 mg – 5 kg	1470,-	962-407	1725,-
323-69	1 mg – 10 kg	1990,-	962-408	2260,-
324-62	1 g – 50 g	310,-	962-415	374,-
324-63	1 g – 100 g	350,-	962-416	424,-
324-64	1 g – 200 g	435,-	962-417	529,-
324-65	1 g – 500 g	560,-	962-418	664,-
324-66	1 g – 1 kg	660,-	962-419	774,-
324-67	1 g – 2 kg	980,-	962-420	1124,-
324-68	1 g – 5 kg	1330,-	962-421	1489,-
324-69	1 g – 10 kg	1850,-	962-422	2024,-
Polished stainless steel				
323-02	1 mg – 50 g	560,-	962-401	720,-
323-03	1 mg – 100 g	610,-	962-402	780,-
323-04	1 mg – 200 g	750,-	962-403	940,-
323-05	1 mg – 500 g	930,-	962-404	1130,-
323-06	1 mg – 1 kg	1100,-	962-405	1310,-
323-07	1 mg – 2 kg	1650,-	962-406	1890,-
323-08	1 mg – 5 kg	2110,-	962-407	2365,-
323-09	1 mg – 10 kg	2880,-	962-408	3150,-
324-02	1 g – 50 g	390,-	962-415	454,-
324-03	1 g – 100 g	450,-	962-416	524,-
324-04	1 g – 200 g	600,-	962-417	694,-
324-05	1 g – 500 g	760,-	962-418	864,-
324-06	1 g – 1 kg	940,-	962-419	1054,-
324-07	1 g – 2 kg	1480,-	962-420	1624,-
324-08	1 g – 5 kg	1950,-	962-421	2109,-
324-09	1 g – 10 kg	2710,-	962-422	2884,-



You can create your own individual weight set yourself:

It contains only the weights which you need for testing purposes. KERN will customise your own personal box out of plastic, wood or aluminium. For more details on this, please see page 184.



Test weights class F2

Class F2 Milligram weights, flat polygonal sheet, aluminium/German silver

Test weight material: Aluminium 1 mg - 5 mg / German silver 10 mg - 500 mg
 Container material: Lined plastic



Milligram weight			Container		DAkkS certificate		Package price	
KERN		Tol ± mg	€		KERN	€	KERN	€
338-01	1 mg	0,06	10,-		347-009-400	2,-	962-451	17,-
338-02	2 mg	0,06	10,-		347-009-400	2,-	962-452	17,-
338-03	5 mg	0,06	10,-		347-009-400	2,-	962-453	17,-
338-04	10 mg	0,08	10,-		347-009-400	2,-	962-454	17,-
338-05	20 mg	0,10	10,-		347-009-400	2,-	962-455	17,-
338-06	50 mg	0,12	10,-		347-009-400	2,-	962-456	17,-
338-07	100 mg	0,16	10,-		347-009-400	2,-	962-457	17,-
338-08	200 mg	0,20	10,-		347-009-400	2,-	962-458	17,-
338-09	500 mg	0,25	10,-		347-009-400	2,-	962-459	17,-

Class F2 Individual weights, cylindrical shape, finely turned stainless steel

Test weight material: finely turned stainless steel
 Container material: Lined plastic or wooden box (337-150-200 and 337-160-200)



Individual weight			Container		DAkkS certificate		Package price	
KERN		Tol ± mg	€		KERN	€	KERN	€
337-01	1 g	0,3	19,-		347-030-400	2,-	962-431	17,-
337-02	2 g	0,4	20,-		347-030-400	2,-	962-432	17,-
337-03	5 g	0,5	22,-		347-030-400	2,-	962-433	17,-
337-04	10 g	0,6	24,-		347-050-400	2,-	962-434	17,-
337-05	20 g	0,8	26,-		347-050-400	2,-	962-435	17,-
337-06	50 g	1,0	28,-		347-070-400	2,-	962-436	17,-
337-07	100 g	1,6	32,-		347-070-400	2,-	962-437	19,-
337-08	200 g	3,0	42,-		347-080-400	2,-	962-438	19,-
337-09	500 g	8,0	60,-		347-090-400	3,-	962-439	19,-
337-11	1 kg	16	84,-		347-110-400	3,-	962-441	19,-
337-12	2 kg	30	129,-		347-120-400	3,-	962-442	24,-
337-13	5 kg	80	220,-		347-130-400	9,-	962-443	24,-
337-14	10 kg	160	415,-		347-140-400	9,-	962-444	24,-
337-15	20 kg	300	710,-		337-150-200	220,-	962-445	27,-
337-16	50 kg	800	1290,-		337-160-200	345,-	962-446	38,-



Alternative to plastic container:

Wooden boxes for individual weights. For more details on this, please see page 183

Class F2 Test weights, stainless steel, stackable

Test weight material: finely turned stainless steel
 Box material: Wood



Test weight				Container		DAkkS certificate		Package price	
KERN		Tol ± mg	Dim. Ø x H	€		KERN	€	KERN	€
337-141	10 kg	160	137x132 mm	550,-		337-141-200	190,-	962-444	24,-
337-151	20 kg	300	137x217 mm	670,-		337-151-200	235,-	962-445	27,-
337-161	50 kg	800	198x250 mm	1790,-		337-161-200	345,-	962-446	38,-

Test weights class F2

Class F2 Weight sets, cylindrical shape, finely turned stainless steel

Test weight material: Individual weights - finely turned stainless steel,
 milligram weights - aluminium 1 mg - 5 mg / German silver 10 mg - 500 mg
 Case material: Lined plastic. Milligram weights 1 mg - 500 mg in removable plastic box



Weight set		+ DAkkS certificate	= Package price	
KERN	€	KERN	€	
338-22	1 mg - 500 mg	143,-	KERN	€
333-024	1 mg - 50 g	365,-	962-450	96,-
333-034	1 mg - 100 g	405,-	962-401	160,-
333-044	1 mg - 200 g	495,-	962-402	170,-
333-054	1 mg - 500 g	570,-	962-403	190,-
333-064	1 mg - 1 kg	690,-	962-404	200,-
333-074	1 mg - 2 kg	970,-	962-405	210,-
333-084	1 mg - 5 kg	1250,-	962-406	240,-
334-024	1 g - 50 g	225,-	962-407	255,-
334-034	1 g - 100 g	265,-	962-415	64,-
334-044	1 g - 200 g	360,-	962-416	74,-
334-054	1 g - 500 g	425,-	962-417	94,-
334-064	1 g - 1 kg	560,-	962-418	104,-
334-074	1 g - 2 kg	850,-	962-419	114,-
334-084	1 g - 5 kg	1120,-	962-420	144,-
			962-421	159,-
				1279,-

Class F2 Weight sets, cylindrical shape, finely turned stainless steel

Test weight material: Individual weights - finely turned stainless steel,
 milligram weights - aluminium 1 mg - 5 mg / German silver 10 mg - 500 mg
 Case material: Wood



Weight set		+ DAkkS certificate	= Package price	
KERN	€	KERN	€	
338-22	1 mg - 500 mg	143,-	KERN	€
333-02	1 mg - 50 g	365,-	962-450	96,-
333-03	1 mg - 100 g	405,-	962-401	160,-
333-04	1 mg - 200 g	495,-	962-402	170,-
333-05	1 mg - 500 g	570,-	962-403	190,-
333-06	1 mg - 1 kg	690,-	962-404	200,-
333-07	1 mg - 2 kg	970,-	962-405	210,-
333-08	1 mg - 5 kg	1250,-	962-406	240,-
333-09	1 mg - 10 kg	1750,-	962-407	255,-
334-02	1 g - 50 g	225,-	962-408	270,-
334-03	1 g - 100 g	265,-	962-415	64,-
334-04	1 g - 200 g	360,-	962-416	74,-
334-05	1 g - 500 g	425,-	962-417	94,-
334-06	1 g - 1 kg	560,-	962-418	104,-
334-07	1 g - 2 kg	850,-	962-419	114,-
334-08	1 g - 5 kg	1120,-	962-420	144,-
334-09	1 g - 10 kg	1610,-	962-421	159,-
				1784,-



You can create your own individual weight set yourself:

It contains only the weights which you need for testing purposes. KERN will customise your own personal box out of plastic, wood or aluminium. For more details on this, please see page 184.

Test weights class M1

Class M1 Milligram weights, flat polygonal sheet, aluminium / German silver

Test weight material: Aluminium 1 mg – 5 mg / German silver 10 mg – 500 mg
 Container material: Lined plastic



Milligram weight			Container		DAkkS certificate		Package price	
KERN		Tol ± mg	€		KERN	€	KERN	€
348-01	1 mg	0,20	4,10		347-009-400	2,-	962-651	14,-
348-02	2 mg	0,20	4,10		347-009-400	2,-	962-652	14,-
348-03	5 mg	0,20	4,10		347-009-400	2,-	962-653	14,-
348-04	10 mg	0,25	4,10		347-009-400	2,-	962-654	14,-
348-05	20 mg	0,3	4,10		347-009-400	2,-	962-655	14,-
348-06	50 mg	0,4	4,10		347-009-400	2,-	962-656	14,-
348-07	100 mg	0,5	4,10		347-009-400	2,-	962-657	14,-
348-08	200 mg	0,6	4,10		347-009-400	2,-	962-658	14,-
348-09	500 mg	0,8	4,10		347-009-400	2,-	962-659	14,-

Class M1 Individual weights, cylindrical shape, finely turned brass or finely turned stainless steel

Test weight material: Individual weights - finely turned brass or finely turned stainless steel
 Container material: Lined plastic



Individual weight			Container		DAkkS certificate		Package price	
KERN		Tol ± mg	€		KERN	€	KERN	€
Finely turned brass								
347-41	1 g	1,0	4,10		347-030-400	2,-	962-631	14,-
347-42	2 g	1,2	4,40		347-030-400	2,-	962-632	14,-
347-43	5 g	1,6	4,80		347-030-400	2,-	962-633	14,-
347-44	10 g	2,0	5,30		347-050-400	2,-	962-634	14,-
347-45	20 g	2,5	5,70		347-050-400	2,-	962-635	14,-
347-46	50 g	3,0	6,70		347-070-400	2,-	962-636	14,-
347-47	100 g	5,0	8,60		347-070-400	2,-	962-637	15,-
347-48	200 g	10	13,-		347-080-400	2,-	962-638	15,-
347-49	500 g	25	28,-		347-090-400	3,-	962-639	15,-
347-51	1 kg	50	43,-		347-110-400	3,-	962-641	15,-
347-52	2 kg	100	77,-		347-120-400	3,-	962-642	16,-
347-53	5 kg	250	165,-		347-130-400	9,-	962-643	16,-
347-54	10 kg	500	310,-		347-140-400	9,-	962-644	16,-
Finely turned stainless steel								
347-01	1 g	1,0	4,60		347-030-400	2,-	962-631	14,-
347-02	2 g	1,2	4,90		347-030-400	2,-	962-632	14,-
347-03	5 g	1,6	5,40		347-030-400	2,-	962-633	14,-
347-04	10 g	2,0	5,80		347-050-400	2,-	962-634	14,-
347-05	20 g	2,5	6,50		347-050-400	2,-	962-635	14,-
347-06	50 g	3,0	8,20		347-070-400	2,-	962-636	14,-
347-07	100 g	5,0	11,-		347-070-400	2,-	962-637	15,-
347-08	200 g	10	16,-		347-080-400	2,-	962-638	15,-
347-09	500 g	25	34,-		347-090-400	3,-	962-639	15,-
347-11	1 kg	50	54,-		347-110-400	3,-	962-641	15,-
347-12	2 kg	100	92,-		347-120-400	3,-	962-642	16,-
347-13	5 kg	250	196,-		347-130-400	9,-	962-643	16,-
347-14	10 kg	500	385,-		347-140-400	9,-	962-644	16,-

Class M1 Test weights, stainless steel, stackable

Test weight material: Stainless steel, finely turned
 Box material: Wood



Test weight				Container		DAkkS certificate		Package price	
KERN		Tol ± g	Dim. Ø x H	€		KERN	€	KERN	€
347-141	10 kg	0,50	137x132 mm	465,-		337-141-200	190,-	962-644	16,-
347-151	20 kg	1,00	137x217 mm	530,-		337-151-200	235,-	962-645	21,-
347-161	50 kg	2,50	198x250 mm	1510,-		337-161-200	345,-	962-646	23,-

Test weights class M1

Class M1 Weight sets, cylindrical shape, finely turned brass or finely turned stainless steel

Test weight material: Individual weights finely turned brass or finely turned stainless steel,

milligram weights aluminium 1 mg - 5 mg / German silver 10 mg - 500 mg

Case material: Lined plastic. Milligram weights 1 mg - 500 mg in removable plastic box



Weight set		+ DAkkS certificate	= Package price
KERN	€	KERN	€
348-22	1 mg - 500 mg	69,-	129,-
Finely turned brass			
343-424	1 mg - 50 g	149,-	249,-
343-434	1 mg - 100 g	162,-	268,-
343-444	1 mg - 200 g	191,-	309,-
343-454	1 mg - 500 g	220,-	344,-
343-464	1 mg - 1 kg	305,-	435,-
343-474	1 mg - 2 kg	485,-	629,-
343-484	1 mg - 5 kg	710,-	861,-
344-424	1 g - 50 g	81,-	121,-
344-434	1 g - 100 g	94,-	140,-
344-444	1 g - 200 g	124,-	182,-
344-454	1 g - 500 g	158,-	222,-
344-464	1 g - 1 kg	250,-	320,-
344-474	1 g - 2 kg	430,-	514,-
344-484	1 g - 5 kg	650,-	741,-
Finely turned stainless steel			
343-024	1 mg - 50 g	155,-	255,-
343-034	1 mg - 100 g	170,-	276,-
343-044	1 mg - 200 g	205,-	323,-
343-054	1 mg - 500 g	245,-	369,-
343-064	1 mg - 1 kg	335,-	465,-
343-074	1 mg - 2 kg	540,-	684,-
343-084	1 mg - 5 kg	800,-	951,-
344-024	1 g - 50 g	88,-	128,-
344-034	1 g - 100 g	102,-	148,-
344-044	1 g - 200 g	139,-	197,-
344-054	1 g - 500 g	179,-	243,-
344-064	1 g - 1 kg	285,-	355,-
344-074	1 g - 2 kg	490,-	574,-
344-084	1 g - 5 kg	750,-	841,-

Class M1 Weight sets, cylindrical shape, finely turned brass or finely turned stainless steel

Test weight material: Individual weights finely turned brass or finely turned stainless steel,

milligram weights aluminium 1 mg - 5 mg / German silver 10 mg - 500 mg

Case material: Wood



Weight set		+ DAkkS certificate	= Package price
KERN	€	KERN	€
348-22	1 mg - 500 mg	69,-	129,-
Finely turned brass			
343-42	1 mg - 50 g	149,-	249,-
343-43	1 mg - 100 g	162,-	268,-
343-44	1 mg - 200 g	191,-	309,-
343-45	1 mg - 500 g	220,-	344,-
343-46	1 mg - 1 kg	305,-	435,-
343-47	1 mg - 2 kg	485,-	629,-
343-48	1 mg - 5 kg	710,-	861,-
343-49	1 mg - 10 kg	1090,-	1248,-
344-42	1 g - 50 g	81,-	121,-
344-43	1 g - 100 g	94,-	140,-
344-44	1 g - 200 g	124,-	182,-
344-45	1 g - 500 g	158,-	222,-
344-46	1 g - 1 kg	250,-	320,-
344-47	1 g - 2 kg	430,-	514,-
344-48	1 g - 5 kg	650,-	741,-
344-49	1 g - 10 kg	1020,-	1118,-

Test weights class M1

Continuation: Class M1 **Weight sets, cylindrical shape, finely turned brass or finely turned stainless steel**



Weight set		DAkkS certificate		Package price	
KERN	€	KERN	€	KERN	€
Finely turned stainless steel					
343-02	1 mg - 50 g	155,-	962-601	100,-	255,-
343-03	1 mg - 100g	170,-	962-602	106,-	276,-
343-04	1 mg - 200 g	205,-	962-603	118,-	323,-
343-05	1 mg - 500 g	245,-	962-604	124,-	369,-
343-06	1 mg - 1 kg	335,-	962-605	130,-	465,-
343-07	1 mg - 2 kg	540,-	962-606	144,-	684,-
343-08	1 mg - 5 kg	800,-	962-607	151,-	951,-
343-09	1 mg - 10 kg	1250,-	962-608	158,-	1408,-
344-02	1 g - 50 g	88,-	962-615	40,-	128,-
344-03	1 g - 100 g	102,-	962-616	46,-	148,-
344-04	1 g - 200 g	139,-	962-617	58,-	197,-
344-05	1 g - 500 g	179,-	962-618	64,-	243,-
344-06	1 g - 1 kg	285,-	962-619	70,-	355,-
344-07	1 g - 2 kg	490,-	962-620	84,-	574,-
344-08	1 g - 5 kg	750,-	962-621	91,-	841,-
344-09	1 g - 10 kg	1190,-	962-622	98,-	1288,-



You can create your own individual weight set yourself:

It contains only the weights which you need for testing purposes. KERN will customise your own personal box out of plastic, wood or aluminium. For more details on this, please see page 184.

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,-.
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,-.

Class M1 Hook weights, finely turned brass

Test weight material: Finely turned brass

Container material: Lined plastic



Hook weight			Container		DAkkS certificate		Package price	
KERN	Tol ± mg	€	KERN	€	KERN	€	KERN	€
347-416	1 g	1,0	347-030-400	2,-	962-631	14,-	28,-	
347-426	2 g	1,2	347-030-400	2,-	962-632	14,-	29,-	
347-436	5 g	1,6	347-030-400	2,-	962-633	14,-	30,-	
347-446	10 g	2,0	347-050-400	2,-	962-634	14,-	31,-	
347-456	20 g	2,5	347-050-400	2,-	962-635	14,-	32,-	
347-466	50 g	3,0	347-070-400	2,-	962-636	14,-	36,-	
347-476	100 g	5	347-090-400	3,-	962-637	15,-	41,-	
347-486	200 g	10	347-090-400	3,-	962-638	15,-	49,-	
347-496	500 g	25	347-110-400	3,-	962-639	15,-	61,-	
347-516	1 kg	50	347-120-400	3,-	962-641	15,-	81,-	
347-526	2 kg	100	347-130-400	9,-	962-642	16,-	129,-	
347-536	5 kg	250	347-140-400	9,-	962-643	16,-	205,-	
347-546	10 kg	500	-	-	962-644	16,-	366,-	

Test weights class M1

Class M1 Slotted weights, finely turned brass

Test weight material: Finely turned brass
Container material: Lined plastic



Slotted weight			Container		DAkkS certificate		Package price	
KERN		Tol ± mg	€		KERN	€	KERN	€
347-415	1 g	1,0	14,-		347-030-400	2,-	962-631	14,-
347-425	2 g	1,2	15,-		347-030-400	2,-	962-632	14,-
347-435	5 g	1,6	16,-		347-030-400	2,-	962-633	14,-
347-445	10 g	2,0	19,-		347-030-400	2,-	962-634	14,-
347-455	20 g	2,5	20,-		347-080-400	2,-	962-635	14,-
347-465	50 g	3,0	22,-		347-080-400	2,-	962-636	14,-
347-475	100 g	5,0	25,-		347-090-400	3,-	962-637	15,-
347-485	200 g	10	30,-		347-090-400	3,-	962-638	15,-
347-495	500 g	25	48,-		347-110-400	3,-	962-639	15,-
347-515	1 kg	50	77,-		347-130-400	9,-	962-641	15,-
347-525	2 kg	100	116,-		347-130-400	9,-	962-642	16,-
347-535	5 kg	250	216,-		347-140-400	9,-	962-643	16,-
347-545	10 kg	500	376,-		347-140-400	9,-	962-644	16,-

Class M1 Beam bars, finely turned brass, for fixing slotted weights

Beam bar material: Brass, aluminium (347-445-100)



Beam bar					DAkkS certificate		
KERN		Size	Largest slotted weight possible	Maximum total load	€	KERN	€
347-445-100*	10 g		100 g	200 g	30,-	962-634	14,-
347-475-100**	100 g		1 kg	2 kg	50,-	962-637	15,-
347-495-100**	500 g		10 kg	20 kg	79,-	962-639	15,-
347-515-100***	1000 g		10 kg	40 kg	118,-	962-641	16,-

Class M1 Block weights, lacquered cast iron / stainless steel

Test weight material: Lacquered cast iron / stainless steel (in OIML classes F1 and F2 on request)



Block weight			DAkkS certificate		Package price	
KERN	Tol ± g	€	KERN	€	KERN	€
Lacquered cast iron						
346-86	5 kg	0,25	65,-	962-643	16,-	81,-
346-87	10 kg	0,50	85,-	962-644	16,-	101,-
346-88	20 kg	1,00	116,-	962-645	21,-	137,-
346-89	50 kg	2,50	320,-	962-646	23,-	343,-
Stainless steel						
346-06	5 kg	0,25	315,-	962-643	16,-	331,-
346-07	10 kg	0,50	455,-	962-644	16,-	471,-
346-08	20 kg	1,00	580,-	962-645	21,-	601,-
346-09	50 kg	2,50	1490,-	962-646	23,-	1513,-

Class M1 Heavy duty weights, cast iron, stackable

Designed to be lifted with forklift trucks or cranes

Test weight material: Lacquered cast iron



Heavy duty weight				DAkkS certificate		
KERN	Tol ± g	Dimensions WxDxH	€	KERN	€	
346-81	100 kg	5	340x225x280 mm	970,-	962-691	60,-
346-82	200 kg	10	465x340x291 mm	1270,-	962-692	60,-
346-83	500 kg	25	750x500x314 mm	2540,-	962-693	60,-
346-84	1000 kg	50	750x500x500 mm	3730,-	962-694	130,-
346-85	2000 kg	100	1000x750x500 mm	6060,-	962-695	190,-

Test weights class M2

Class M2 Individual weights, cylindrical shape, finely turned brass

Test weight material: finely turned brass

Container material: Lined plastic



Alternative to plastic container:

Wooden boxes for individual weights. For more details on this, please see page 183

Class M2 Block weights, lacquered cast iron

Test weight material: Lacquered cast iron



Block weight		
KERN	Tol ± g	€
356-86	5 kg	0,8
356-87	10 kg	1,6
356-88	20 kg	3,0
356-89	50 kg	8,0

DAkkS certificate	
KERN	€
962-643	16,-
962-644	16,-
962-645	21,-
962-646	23,-

Class M2 Weight sets, cylindrical shape, finely turned brass

Test weight material: Finely turned brass

Case material: Wood



Weight set		
KERN	€	
354-42	1 g - 50 g	78,-
354-43	1 g - 100 g	89,-
354-44	1 g - 200 g	117,-
354-45	1 g - 500 g	149,-
354-46	1 g - 1 kg	245,-
354-47	1 g - 2 kg	405,-
354-48	1 g - 5 kg	610,-
354-49	1 g - 10 kg	970,-

DAkkS certificate	
KERN	€
962-615	40,-
962-616	46,-
962-617	58,-
962-618	64,-
962-619	70,-
962-620	84,-
962-621	91,-
962-622	98,-

Test weights class M3

Class M3 Individual weights, cylindrical shape, finely turned brass

Test weight material: Finely turned brass
Container material: Lined plastic



Individual weight			Container		DAkkS certificate		Package price		
KERN		Tol ± mg		KERN	€	KERN	€	KERN	€
367-41	1 g	10	3,10	347-030-400	2,-	962-631	14,-		19,10
367-42	2 g	12	3,40	347-030-400	2,-	962-632	14,-		19,40
367-43	5 g	16	3,80	347-030-400	2,-	962-633	14,-		19,80
367-44	10 g	20	4,20	347-050-400	2,-	962-634	14,-		20,20
367-45	20 g	25	4,60	347-050-400	2,-	962-635	14,-		20,60
367-46	50 g	30	5,40	347-070-400	2,-	962-636	14,-		21,40
367-47	100 g	50	6,70	347-070-400	2,-	962-637	15,-		23,70
367-48	200 g	100	9,80	347-080-400	2,-	962-638	15,-		26,80
367-49	500 g	250	22,-	347-090-400	3,-	962-639	15,-		40,-
367-51	1 kg	500	35,-	347-110-400	3,-	962-641	15,-		53,-
367-52	2 kg	1000	59,-	347-120-400	3,-	962-642	16,-		78,-

Class M3 Individual weights, cylindrical shape, lacquered cast iron

Test weight material: Lacquered cast iron.



Individual weight			DAkkS certificate		Package price		
KERN		Tol ± g		KERN	€	KERN	€
366-91	100 g	0,05	11,-	962-637	15,-		26,-
366-92	200 g	0,10	12,-	962-638	15,-		27,-
366-93	500 g	0,25	18,-	962-639	15,-		33,-
366-94	1 kg	0,50	22,-	962-641	15,-		37,-
366-95	2 kg	1,0	40,-	962-642	16,-		56,-
366-96	5 kg	2,5	66,-	962-643	16,-		82,-
366-97	10 kg	5,0	118,-	962-644	16,-		134,-

Class M3 Block weights, lacquered cast iron

Test weight material: Lacquered cast iron



Block weight			DAkkS certificate		Package price		
KERN		Tol ± g		KERN	€	KERN	€
366-86	5 kg	2,5	59,-	962-643	16,-		75,-
366-87	10 kg	5,0	79,-	962-644	16,-		95,-
366-88	20 kg	10	110,-	962-645	21,-		131,-
366-89	50 kg	25	300,-	962-646	23,-		323,-

Class M3 Weight sets, cylindrical, brass and lacquered cast iron

Test weight material: Brass and lacquered cast iron
Case material: Wooden block



Weight set		DAkkS certificate		Package price		
KERN			KERN	€	KERN	€
362-96	1 g - 1 kg	140,-	962-619	70,-		210,-
362-97	1 g - 2 kg	225,-	962-620	84,-		309,-
362-98	1 g - 5 kg	295,-	962-621	91,-		386,-
362-99	1 g - 10 kg	420,-	962-622	98,-		518,-

Test weights accessories

Tweezers, gloves, dusting brush



Tweezers

to be able to safely grip small test weights

For class	For weights	KERN	Length	Version	€
E1 – F1	1 mg – 200 g	315-243	105 mm	1	Stainless steel with silicone-coated tips 15,-
E1 – F1	500 g – 2 kg	315-245	250 mm	1	Stainless steel with silicone-coated tips 32,-
F2 – M3	1 mg – 200 g	335-240	100 mm	2	Stainless steel 6,80
E1 – M1	1 mg – 200 g	315-242	100 mm	3	Plastic 6,20



Gloves

cotton, 1 pair. Help to protect the test weights when being used daily, from grease from fingers, damp etc.

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.

KERN	€
317-290	6,90



Dusting brush

to clean the weights

KERN	€
318-270	4,20

Boxes for individual weights / test weights

Box material: Lined wood

Suitable for individual weights

KERN-Nr. 307, 316, 317, 326, 327, 329



For weights ≤ 500 g



For weights ≥ 1 kg



For weights ≥ 10 kg

Box material: Wood

Suitable for individual weights

KERN-Nr. 337, 347, 357, 367



For weights ≤ 500 g



For weights ≥ 1 kg



For weights ≥ 10 kg

Wooden box

for individual weights E1 – F1

For weight	KERN	€
mg	338-090-200	14,-
1 g	317-010-100	28,-
2 g	317-020-100	28,-
5 g	317-030-100	28,-
10 g	317-040-100	28,-
20 g	317-050-100	28,-
50 g	317-060-100	28,-
100 g	317-070-100	28,-
200 g	317-080-100	28,-
500 g	317-090-100	31,-
1 kg	317-110-100	35,-
2 kg	317-120-100	44,-
5 kg	317-130-100	66,-
10 kg	317-140-100	89,-
20 kg	317-150-100	340,-
50 kg	317-160-100	415,-

Wooden box

for check weights F2, M1

For weight	KERN	€
10 kg	337-141-200	190,-
20 kg	337-151-200	235,-
50 kg	337-161-200	345,-

Wooden box

for individual weights F2 – M3

For weight	KERN	€
mg	338-090-200	14,-
1 g	337-010-200	14,-
2 g	337-020-200	14,-
5 g	337-030-200	14,-
10 g	337-040-200	14,-
20 g	337-050-200	14,-
50 g	337-060-200	15,-
100 g	337-070-200	15,-
200 g	337-080-200	16,-
500 g	337-090-200	19,-
1 kg	337-110-200	24,-
2 kg	337-120-200	27,-
5 kg	337-130-200	47,-
10 kg	337-140-200	61,-
20 kg	337-150-200	220,-
50 kg	337-160-200	345,-

Aluminium box

for individual weights, cylindrical shape, class E1, E2, F1 and F2

Largest possible weight	KERN	€
10 kg	317-140-600	245,-
20 kg	317-150-600	275,-

Test weights accessories

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.



Plastic case

for individual weight sets classes E2 – M3,
not appropriate for cast iron weights

KERN	Largest possible weight	€
313-050-400	≤ 500 g	82,-
313-080-400	≤ 5 kg	180,-

Sample order:

Your individual weight set:

1 x 50 g, 2 x 100 g, 1 x 500 g, 2 x 1 kg, 1 x 2 kg.

The correct individual box is **KERN-Nr. 313-080-400** (plastic) or **KERN-Nr. 315-070-100** (wood).



Wooden box

for individual weight sets classes E1 – F1

KERN	Largest possible weight	€
315-040-100	≤ 200 g	124,-
315-060-100	≤ 1 kg	185,-
315-070-100	≤ 2 kg	245,-
315-080-100	≤ 5 kg	350,-
315-090-100	≤ 10 kg	465,-



Wooden box

for individual weight set classes F2 – M3

KERN	Largest possible weight	€
335-040-200	≤ 200 g	58,-
335-050-200	≤ 500 g	61,-
335-060-200	≤ 1 kg	108,-
335-070-200	≤ 2 kg	134,-
335-080-200	≤ 5 kg	210,-
335-090-200	≤ 10 kg	300,-

Plastic carrying case for standard weight sets



Plastic case for weight sets

with standard denomination classes E2 – M3,
not appropriate for cast iron weights

KERN	Largest possible weight	€
313-052-400	≤ 500 g	55,-
313-082-400	≤ 5 kg	154,-

Aluminium case

for safe storage and transportation under harsh industrial conditions.

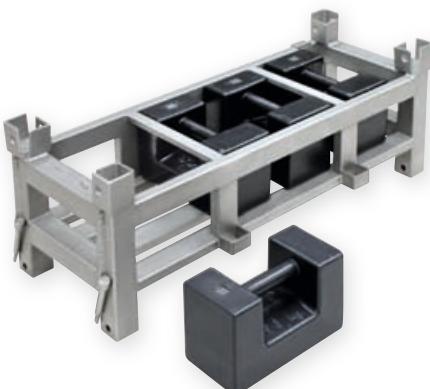


Aluminium case

for weight sets with standard denomination classes E1, E2

KERN	Largest possible weight	€
313-042-600	≤ 200 g	230,-
313-062-600	≤ 1 kg	310,-
313-082-600	≤ 5 kg	390,-
313-090-600	≤ 10 kg	470,-

Weight carriers for block weights or other test weights



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.