

PROFESSIONAL MEASURING

180 JAHRE  
seit 1844  
KERN & SOHN

**KERN**

KERN – YOUR PARTNER FOR  
MEASURING AND WEIGHING TECHNOLOGY





PROFESSIONAL MEASURING

**180** JAHRE  
seit 1844  
**KERN & SOHN**

**KERN**

## SPEAKER



### **Marcel Turino**

Dep. Test services /  
Deputy head of calibration laboratory

Phone: +49 7433 9933-207

E-Mail: [turino@kern-sohn.com](mailto:turino@kern-sohn.com)

KERN & SOHN GmbH

Ziegelei 1

72336 Balingen

[www.kern-sohn.com](http://www.kern-sohn.com)

# Why calibrate and verify?

## BRIEF INTRODUCTION TO THE BASICS



# Calibration

- Determining the deviation of a measuring device
  - Documentation in a calibration certificate
  - optional: Conformity assessment regarding tolerances
  - optional: Adjustment
    - **Correction** of this deviation
- The customer is responsible for the recalibration period



„DAkS calibration“	Factory calibration (ISO-Kalibrierung)
<ul style="list-style-type: none"> <li>• Only by accredited laboratories</li> <li>• International recognition (ILAC-MRA)</li> <li>• Guarantee of traceability and correctness of procedures, measurement results and measurement uncertainty</li> <li>• explicitly required in some standards environments</li> </ul>	<ul style="list-style-type: none"> <li>• Can be offered by anyone</li> <li>• Measurement method, competence, traceability must be verified by the customer</li> <li>• Supplier assessment / qualification is necessary</li> </ul>



# Sample calibration certificate weights



Akkreditiertes Kalibrierlabor seit 1994.  
Accredited calibration laboratory since 1994.

Ihr Partner für Kalibrierdienstleistungen, Prüfmittelmanagement und Beratung.  
Your partner for calibration services, test equipment management and support.

Mitglied im / member of the

Deutschen Kalibrierdienst



Deutsche  
Akkreditierungsstelle  
D-K-19408-01-00

Sample  
D-K-  
19408-01-00  
2023-04

Kalibrierschein  
Calibration certificate

Sample-2023-04/1

Kalibrierzeichen  
Calibration mark

Gegenstand  
Object

Gewichtssatz, 1 mg - 1 kg  
Klasse E2

Set of weights, 1 mg - 1 kg  
Class E2

Hersteller  
Manufacturer

KERN & Sohn GmbH  
Ziegelei 1  
D-72336 Balingen  
Germany

Typ  
Type

313-052

Fabrikate/Serien-Nr.  
Serial number

G123456789

Auftraggeber  
Customer

Mustermann GmbH

Dieser Kalibrierschein dokumentiert die metrologische Rückführbarkeit auf nationale Normale zur Darstellung der Einheiten in Übereinstimmung mit dem Internationalen Einheitensystem (SI). Die DAkkS ist Unterzeichner der multilateralen Übereinkommen der European co-operation for Accreditation (EA) und der International Laboratory Accreditation Cooperation (ILAC) zur gegenseitigen Anerkennung der Kalibrierscheine. Für die Einhaltung einer angemessenen Frist zur Wiederholung der Kalibrierung ist der Benutzer verantwortlich.

This calibration certificate documents the metrological traceability to national standards, which realize the units of measurement according to the International System of Units (SI).

Messergebnisse:  
Measurement results:

2023-04

Nennwert <i>nominal value</i>	Kennzeichnung <i>marking</i>	konventioneller Wägewert <i>conventional mass</i>	Unsicherheit <i>k=2</i> <i>uncertainty</i>	Fehlergrenze <i>max. perm. error</i>	Klasse* <i>class*</i>
1 mg		1 mg + 0,0010 mg	0,0020 mg	± 0,0060 mg	E2 ✓
2 mg		2 mg + 0,0005 mg	0,0020 mg	± 0,0060 mg	E2 ✓
2 mg	*	2 mg + 0,0016 mg	0,0020 mg	± 0,0060 mg	E2 ✓
5 mg		5 mg + 0,0010 mg	0,0020 mg	± 0,0060 mg	E2 ✓
10 mg		10 mg + 0,0009 mg	0,0020 mg	± 0,0080 mg	E2 ✓
20 mg		20 mg - 0,001 mg	0,003 mg	± 0,010 mg	E2 ✓
20 mg	*	20 mg + 0,001 mg	0,003 mg	± 0,010 mg	E2 ✓
50 mg		50 mg + 0,001 mg	0,004 mg	± 0,012 mg	E2 ✓
100 mg		100 mg + 0,001 mg	0,005 mg	± 0,016 mg	E2 ✓
200 mg		200 mg + 0,002 mg	0,006 mg	± 0,020 mg	E2 ✓
200 mg	*	200 mg + 0,003 mg	0,006 mg	± 0,020 mg	E2 ✓
500 mg		500 mg + 0,005 mg	0,008 mg	± 0,025 mg	E2 ✓
1 g		1 g + 0,002 mg	0,010 mg	± 0,030 mg	E2 ✓
2 g		2 g + 0,002 mg	0,013 mg	± 0,040 mg	E2 ✓
2 g	*	2 g + 0,002 mg	0,013 mg	± 0,040 mg	E2 ✓
5 g		5 g + 0,010 mg	0,016 mg	± 0,050 mg	E2 ✓
10 g		10 g - 0,007 mg	0,020 mg	± 0,060 mg	E2 ✓
20 g		20 g + 0,005 mg	0,026 mg	± 0,080 mg	E2 ✓
20 g	*	20 g + 0,015 mg	0,026 mg	± 0,080 mg	E2 ✓
50 g		50 g + 0,02 mg	0,03 mg	± 0,10 mg	E2 ✓
100 g		100 g + 0,01 mg	0,05 mg	± 0,16 mg	E2 ✓
200 g		200 g + 0,05 mg	0,10 mg	± 0,30 mg	E2 ✓
200 g	*	200 g - 0,00 mg	0,10 mg	± 0,30 mg	E2 ✓
500 g		500 g + 0,10 mg	0,26 mg	± 0,80 mg	E2 ✓
1 kg		1 kg + 0,1 mg	0,5 mg	± 1,6 mg	E2 ✓

\* Bewertung der Klasse bzw. der Fehlergrenze (wenn keine Klassenangabe vorhanden ist) bezieht sich nur auf den konventionellen Wägewert.

The assessment of the class / the max. perm. error (if no class assessment is given) only refers to the conventional mass.



# Sample calibration certificate balance

Seite 4 zum Kalibrierschein  
Page of the calibration certificate

B61-109-2024-03/1

B61-109

D-K-  
19408-01-00

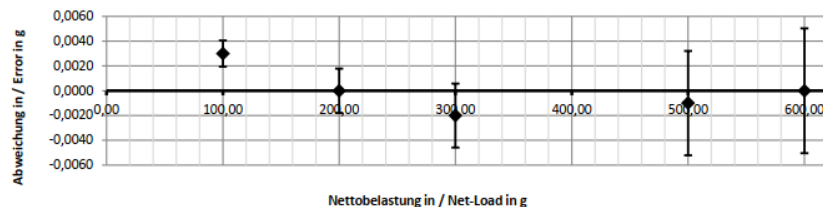
2024-03

### Messunsicherheit / Measuring uncertainty

Angegeben ist die erweiterte Messunsicherheit, die sich aus der Standardmessunsicherheit durch Multiplikation mit dem Erweiterungsfaktor  $k$  ergibt. Sie wurde gemäß EA-4/02 M: 2022 und EURAMET/cg-18/v4.0 ermittelt.  
 Der Wert der Messgröße liegt im Regelfall mit einer Wahrscheinlichkeit von mindestens 95% im zugeordneten Werteintervall.  
 Die Ergebnisse gelten nur für den kalibrierten Gegenstand im Zustand und unter den Bedingungen zum Zeitpunkt der Kalibrierung. Ein Anteil für die Langzeitstabilität des Kalibriergegenstandes ist nicht enthalten.  
*The expanded measuring uncertainty is calculated by multiplication of the standard measuring uncertainty with the coverage factor  $k$ . It was determined according to EA-4/02 M: 2022 and EURAMET/cg-18/v4.0. The value of the test weight is normally with a probability of at least 95 % within the assigned value interval.  
 The results apply only to the calibrated item in the condition and under the conditions at the time of calibration. A proportion for the long-term stability of the calibration item is not included.*

Prüflast <i>Load</i>	Abweichung <i>Error</i>	Erweiterungs- faktor $k$ <i>Coverage factor</i>	Unsicherheit <i>uncertainty</i>	relative Unsicherheit <i>Rel. uncertainty</i>
100 g	0,003 g	2,00	0,0011 g	0,00105 %
200 g	0,000 g	2,00	0,0018 g	0,00089 %
300 g	-0,002 g	2,00	0,0026 g	0,00086 %
500 g	-0,001 g	2,00	0,0043 g	0,00084 %
600 g	0,000 g	2,00	0,0051 g	0,00084 %

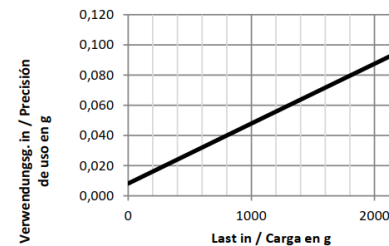
### Darstellung im Diagramm / Representation as chart



$$G = 0,009 \text{ g} + 3,96 \cdot 10^{-5} \cdot m_w$$

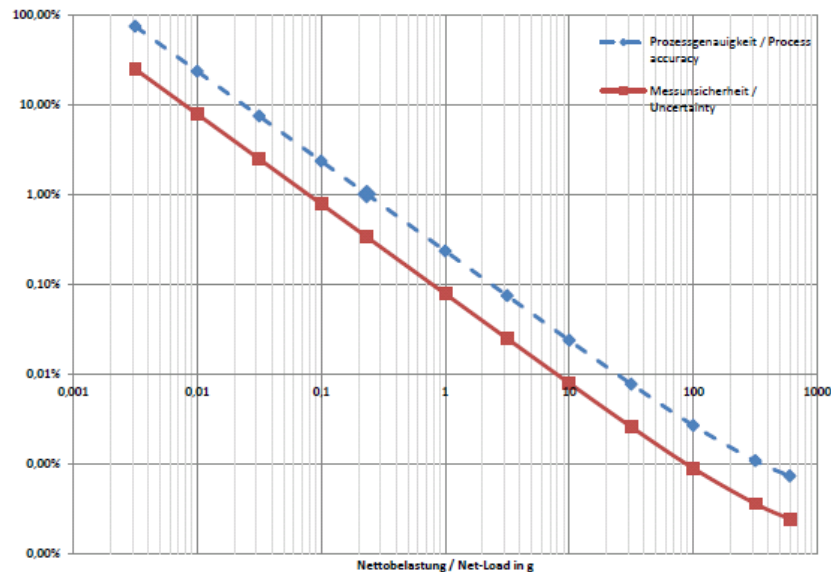
$m_w$  = Nettoanzeige bei zunehmender Belastung  
 Indicación del valor neto con carga creciente

### Diagramm der Verwendungsgenauigkeit / Diagrama de la exactitud de uso:



# Min. sample weight DAkKS

geforderte Prozessgenauigkeit Required process accuracy	Sicherheitsfaktor Safety coefficient			
	1	3	5	10
0.1%	0,775 g	2,332 g	3,895 g	7,838 g
0.2%	0,388 g	1,164 g	1,942 g	3,895 g
0.5%	0,155 g	0,465 g	0,775 g	1,553 g
1.0%	0,077 g	0,232 g	0,388 g	0,775 g
2.0%	0,039 g	0,116 g	0,194 g	0,388 g
5.0%	0,015 g	0,046 g	0,077 g	0,155 g
10.0%	0,008 g	0,023 g	0,039 g	0,077 g



# USP/Ph.Eur

Certificate / minimum weight acc. to

Ph. Eur. Chapter 2.1.7

Certificate#	USP-KERN-2022-10
--------------	------------------

Date of test	26. Oktober 2022
Type of test	before maintenance

<b>Balance</b>				
Manufacturer KERN & SOHN GmbH				
Type ABT 220-SDM				
Serial n° WX123456789				
Inventory number B2-04				
Range	1	2	3	4
Max	80 g	220 g		
d=	0,01 mg	0,1 mg		

<b>Customer</b>	
Company	Sample company GmbH
Dept.	Quality control
Street	Sample street 1
City	12345 Sample city

<b>Remarks</b>	
The balance was adjusted with the internal adjustment weight before recording the measured values.	

<b>Installation site</b>	
Installation site	Laboratory
Temperature	23 °C
Wind draft	no
Vibrations	no

<b>Repeatability</b>		
<b>Test weight</b>	<b>Measured values</b>	<b>Analysis</b>
Identification G123456789	1 2,00000 g	Standard deviation s = 0,000 mg
Class (OIML) E2	2 2,00000 g	
Nominal value 2 g	3 2,00000 g	△ = 0,00 %
Tol. (mpe) 0,04 mg	4 2,00000 g	max.: 0,10 % ✓
	5 2,00000 g	Minimum weight M <sub>min</sub> = 8,20 mg
	6 2,00000 g	
	7 2,00000 g	
	8 2,00000 g	
	9 2,00000 g	
	10 2,00000 g	
<b>Preload</b>		
Tara load 0 g		

<b>Sensitivity</b>		
<b>Test weight</b>	<b>Indication</b>	<b>Analysis</b>
Identification G123456	Target indication 200,00000 g	Indication deviation ΔI = -0,00010 g
Class (OIML) E2		
Nominal value 200 g	Actual indication 199,99990 g	△ = -0,00 %
Tol. (mpe) 0,3 mg		max.: 0,05 % ✓

<b>Assessment</b>	
The requirement according to Ph. Eur. 2.1.7 for a repeatability of ≤ 0.10% is fulfilled for weights of sample taken ≥ 8,2 mg. The test of sensitivity at ≤ 0.05% was passed.	

The on-site calibration employee of company **Sample balance company** carried out the data recording.

Date	Signature
26. Oktober 2022	
	Sample calibration employee

## Verification / EU conformity assessment of balances

- Legally regulated area (consumer protection)
  - if price is determined by weighing
  - Medicinal products in pharmacies
  - Production of prepackages
  
- New devices: Conformity assessment
  - EU law (Directive 2014/31/EU)
  - Device requires type approval
  - By the manufacturer, ex works

-> KERN needs the location of use
  
- Reverification:
  - National law, prescribed verification periods
  - By verification authorities





# Example: Declaration of conformity („verification“)



**KERN & SOHN GmbH**

Ziegelei 1  
72336 Balingen-Frommern  
Germany

**www.kern-sohn.com**

+0049-[0]7433-9933-0  
+0049-[0]7433-9933-149  
info@kern-sohn.com

## EU-Konformitätserklärung | EU Declaration of Conformity

**DE** Wir erklären hiermit unter alleiniger Verantwortung, dass das Produkt, auf das sich diese Erklärung bezieht, mit den nachstehenden Richtlinien übereinstimmt. Das Produkt erfüllt die einschlägigen Harmonisierungsrechtsvorschriften der Union. Das Produkt wurde unter Berücksichtigung untenstehender Normen gefertigt und entspricht den genannten Richtlinien.

**EN** We hereby declare under our sole responsibility that the product to which this declaration relates complies with the directives listed below. The product complies with the relevant Union harmonization legislation. The product was manufactured by applying the standards below and corresponds to the directives mentioned.

TYPE REF

Typ | Type |

**IOC 10K-3LM**

SN

Seriennr. | Serial no. |

**WI23000113**

CE Kennzeichnung CE mark applied	EU-Richtlinie EU directive	Normen Standards	Bauartzulassungen Type approvals
CE	2011/65/EU (RoHS) <i>OJ L 174, 1.7.2011, p. 88-110</i>	EN 63000:2018	
CE	2014/30/EU (EMC) <i>OJ L 96, 29.3.2014, p. 79-106</i>	EN 61326-1:2013 EN IEC 61000-6-1:2019	
CE <b>M24</b> <b>0122<sup>1)</sup></b>	2014/31/EU (NAWI) <i>OJ L 96, 29.3.2014, p. 107-148</i>	EN 45501:2015	0200-NAWI-03039 <sup>2)</sup>
CE	2014/35/EU (LVD) <i>OJ L 96, 29.3.2014, p. 357-374</i>	EN 62368-1:2014+A11:2017	



g = 9,810 m/s<sup>2</sup>

---

Ort oder Zone: Deutschland  
Location or zone:

Datum | Date | 01.03.2024

Ort der Ausstellung: 72336 Balingen,  
Place of issue: Germany

Signatur:  
Signature:

## Verification of weights

- Why verified weights?
  - ✓ For balances where the weights contribute to the measurement result -> beam scales or similar
  - × (DAkKS) calibrated weights are recognized for the verification of scales.
  - × In the industrial / non-regulatory sector, calibration is sufficient.
  - ? Further use cases?
- EC calibration of weights ends on 30.11.2025 in accordance with the MessEV
- ? Is there still a need for “verified” new weights?
- ? How to communicate to the customer?



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**KERN & SOHN**

**KERN**

## TEST SERVICES

Overview of the range of services

**30** JAHRE  
seit 1994  
**PRÜFDIENST**



## Range of services

- **DAkkS calibration**
  - balances [according to EURAMET cg-18]
    - Up to 50t
    - Inhouse and On-Site (BACOS)      -> Partnership system
    - Qualification (IQ/OQ/PQ)      -> **new:** EQS
  - Weight pieces [according to OIML R111]
    - 1mg – 2500kg, up to class E1
    - Volume determination
    - Inhouse and On-Site (MACOS)      -> **new:** up to 2500kg
  - Force measuring devices [according to DKD-R 3-3, ISO 376]
  - Temperature and air humidity measuring devices [according to DKD-R 5-1 / 5-8]
  
- **Factory calibration of various measuring devices**
  
- **Verification**
  - Conformity assessment of balances [NAWI]
  - Verification body („Reverification“ of balances and weights)

# KERN TEST SERVICES / CALIBRATION LABORATORY – Marketing material

## KERN Test services brochure

- Focus on calibration and verification at KERN an On-Site
- more details than in the main catalogue



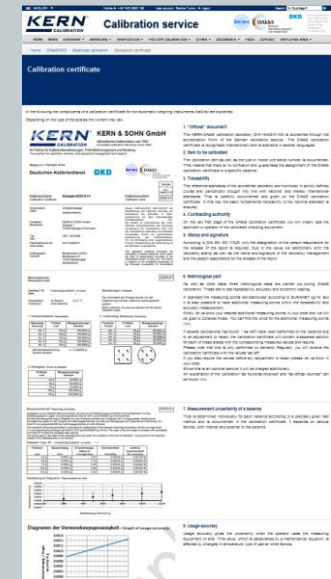
## KERN main catalogue balances & TEST SERVICE

- Chapter test services



## kern-lab.com

- News
- Explanations, FAQs
- Price lists
- Sample calibration certificates
- Certificates, deeds, forms
- Calibration certificate download
- Price quote generator
- Order status
  
- planned: Test equipment database
- planned: RMA



# kern-lab.com – Price quote generator

## Add recalibration or reverification of test weight

Below please enter the data of the single weight or weight set which should be recalibrated / reverificated. It will be issued only one calibration certificate

<b>Service</b>	<b>Weight class</b>	<b>OIML conform *</b>
<input checked="" type="checkbox"/> Recalibration DAkkS <input type="checkbox"/> Reverification	<input type="text" value="E2"/>	<input checked="" type="checkbox"/>

\* OIML conform weights allow a standardized and efficient handling during the calibration. Non OIML conform weights (e.g. special shape, special material,...) need special effort and will be charged additionally.

<b>Standard weight set</b>	<b>Smallest weight</b>	<b>Largest weight</b>	<b>add</b>
	<input type="text" value="1 g"/>	<input type="text" value="200 g"/>	<b>+more</b>

## Add recalibration or reverification of balance

<b>Service</b>	<b>On-site calibration</b> <input type="checkbox"/>	
<input checked="" type="checkbox"/> Recalibration DAkkS <input type="checkbox"/> Reverification		
<b>Manufacturer</b>	<b>Model name</b>	<b>Serial number</b>
<input type="text" value="KERN"/>	<input type="text" value="ABT 220-5DNM"/>	<input type="text" value="WX12345678"/>

- Please do not forget to include the accessories relevant for the calibration (power supply unit(s), leveling feet, etc.). Thank you very much!
- If you require a conformity assessment, please indicate this in the next step in the field "Remarks", specifying the desired tolerance.
- In the next step, please specify in the field "Remarks" how the calibration certificate should be issued in case of a necessary adjustment. You can choose here between "Values after adjustment (as left)" and "Values before and after adjustment (as found/as left)". Please note that the calibration as found/as left causes additional costs.

**add**



# kern-lab.com – Price quote generator

Your price quote (#A3619717)

**Add position:**

Calibration / verification of

+ Test weight | + Balance | + Misc. measuring device

Amount	Article	Description	Single price*	Total price*
1x <a href="#">Delete</a>	962-317R <i>Weight</i> <i>Recalibration DAkkS</i>	E2 1 g - 200 g DAkkS Certificate Conventional mass value in the Certificate: Deviation from nominal value and uncertainty E2, 1 g - 200 g	250.00 € <i>+ 20.00 € Preparation</i>	270.00 €
1x <a href="#">Delete</a>	963-101R <i>Balance</i> <i>Recalibration DAkkS</i>	DAkkS-certificate for analytical balances < 5 kg  KERN ABT 220-5DNM  WX12345678	193.00 € <i>+ 24.00 € Preparation</i>	217.00 €
			<b>Sum:</b>	<b>487.00 €</b>
			<input type="checkbox"/> +Pick-up service:	
			+ Packaging:	4.00 €
			+ Return shipping: <i>Deutschland</i>	8.50 €
			<input type="checkbox"/> +Express delivery	
			<input type="checkbox"/> +Express service	
<p>During calibration it is possible that further actions are needed (adjustment, replacement). After getting your release these costs will be charged additionally to the price on the order confirmation.</p> <p><a href="#">Here you will find information on any necessary reworking of weights.</a></p>			<b>Total:</b>	<b>499.50 €</b>

## Request official price quote

Company\*

Customer number

Last name \*

Surname

E-mail \*

Telephone


Street / number\*

Country\*

ZIP\*

City\*

Remarks

Ich bin kein Roboter.  reCAPTCHA

Datenschutzerklärung · Nutzungsbedingungen

[Request official price quote](#) \* These fields are required

# kern-lab.com – Order status

## Order status

Would you like us to keep you informed by e-mail about progress on this order? [Please inform me about the current status regarding this order.](#)

**Current status:**

**packaging**

**est. shipping date: 29/02/2024** *(If necessary actions should be taken, the completion may be delayed.)*

Cal. object / Ident.	Tasks	Progress	Last/current step	Next step
1x E2 Rekal [E2 (1 mg)] 318-01 / G1719121(Q167)	<ul style="list-style-type: none"> <li>Recalibration weight class E2</li> </ul>	+90 %	Calibration certificates created ✓ (2024-03-07 08:26)	Packing
1x E1 Rekal [E1 (200 mg)] 308-38 / G1822494(Q170)	<ul style="list-style-type: none"> <li>Recalibration weight class E1</li> </ul>	+90 %	Calibration certificates created ✓ (2024-03-07 08:17)	Packing
1x E1 Rekal [E1 (100 mg)] 308-37 / G1716064(Q164)	<ul style="list-style-type: none"> <li>Recalibration weight class E1</li> </ul>	+90 %	Calibration certificates created ✓ (2024-03-07 08:17)	Packing
1x E1 Rekal [E1 (50 mg)] 308-36 / G1716063(Q182)	<ul style="list-style-type: none"> <li>Recalibration weight class E1</li> </ul>	+90 %	Calibration certificates created ✓ (2024-03-07 08:17)	Packing

## Documents for this order

Date	Doc. No	Document type	Calibration mark	Serial number	↓
2024-02-22	2024-24015961	Order confirmation			↓





# kern-lab.com – Calibration certificate download

## Calibration certificate search

### Certificate number

Please enter the number of your calibration certificate in the same format as on the calibration certificate here:



Akkreditiertes Kalibrierlabor seit 1994. Accredited calibration laboratory since 1994.

Ihr Partner für Kalibrierdienstleistungen, Prüfmittelmanagement und Beratung. Your partner for calibration services, test equipment management and support.

Mitglied im / member of the

Deutschen Kalibrierdienst



Kalibrierschein Calibration certificate G1-100-2023-1011

Kalibrierzeichen Calibration mark G1-100 19409 01-00 2023-10

### Serial no., ident no., customer no. or order no.

Please also enter your serial, test equipment, customer or order number here. You will find your order or customer number e.g. on the order confirmation:



KERN & SOHN GmbH | Postfach 4052 | 72336 Balingen - Germany  
KERN & SOHN GmbH  
Ziegelhof 1  
72336 Balingen

PROFESSIONAL MEASURING  
KERN & SOHN GmbH  
Ziegelhof 1  
72336 Balingen  
Germany  
Postfach 4052  
72336 Balingen  
Tel.: +49 7433 9933-0  
Fax: +49 7433 9933-149  
info@kern-sohn.com  
www.kern-sohn.com



### Selected for download

Download provided data as ZIP.

Calibration date	Calibration mark	Description	Model	Serial number	Inventory number	Status
2023-12-07	G1-181-23-12	F1 10 kg DAkkS Certificate	-	G2233599		
2023-12-07	G1-182-23-12	F1 10 kg DAkkS Certificate	-	G2233600		

## Outlook: Digital calibration certificates

- Calibration certificates as PDF via mail or download
  - Ecological, efficient, modern
  - Sending by email to the client
  - Download at kern-lab.com
  - Paper printout in future only on request
  - Conversion in about three months
  
- PTB DCC (Digital Calibration Certificate)
  - International project, under development supervised by the Physikalisch-Technische Bundesanstalt
  - For balances and weights available in first version, currently only on request





# Outlook: Request for measures online

## Order status

[✓Retrieve order status](#)

## Recommended actions

The following measure(s) is/are required for your test equipment. Below you have the option of accepting or rejecting the measure(s). If you have any further requests or questions, please let us know using the message field.

Item	Calibration mark	Serial number/ marking	Result / State	Tolerance	Required action	Price	Already answered
E180400010	G5-613-2022-04	10 g (F1)			Demagnetize weight ⓘ		Accepted <small>18.07.2022, wf</small>
E180400010	G5-613-2022-04	10 g * (F1)			Demagnetize weight ⓘ		Accepted <small>18.07.2022, wf</small>
E180400010	G5-613-2022-04	2 mg (F1)	0 mg ± 0.006 mg	0.02 mg	Replace weight ⓘ		Accepted <small>18.07.2022, wf</small>
E180400010	G5-613-2022-04	20 g (F1)			Demagnetize weight ⓘ		Accepted <small>18.07.2022, wf</small>
E180400010	G5-613-2022-04	50 g (F1)	0.2 χ ± 0.02 χ	0.2 χ	Replace weight ⓘ		Accepted <small>18.07.2022, wf</small>

## Direct message regarding this order

Is there anything else you would like to tell us? Please enter your message directly in the message field below.

Order no.

Kindly enter your message here.

Send copy of this message to the email address mentioned on the order

Send copy of this message to my email-address:

Submit

## Outlook: „Bundle articles“

- Article+C: Balance with calibration (+C)
- Article+V: Balance with „verification“= EU decl. of conformity (+V)
- Weight with box and calibration:

326-11K+C	F1 1 kg weight w/ calibration Eco-Form in plastic box, Stainless steel (OIML)
326-12K+C	F1 2 kg weight w/ calibration Eco-Form in plastic box, Stainless steel (OIML)
326-13K+C	F1 5 kg weight w/ calibration Eco-Form in plastic box, Stainless steel (OIML)
326-14K+C	F1 10 kg weight w/ calibration Eco-Form in plastic box, Stainless steel (OIML)
343-066+C	1 g - 1 kg weight set w/ calibration Cylindrical in aluminium case, Finely turned stainless steel...
344-066+C	M1 1 g - 1 kg weight set w/ calibration Cylind... in aluminium case, Finely turned stainless steel...
346-86+C	M1 5 kg weight w/ calibration Rectangular , Lacquered cast iron
346-87+C	M1 10 kg weight w/ calibration Rectangular , Lacquered cast iron
346-88+C	M1 20 kg weight w/ calibration Rectangular , Lacquered cast iron

## Outlook: **Weights with calibration ex stock (0 days)**

- Calibration needs time:  
Current processing time up to 4 days.
- Planned improvements:
  - Dispatch ex stock with calibration (0 days)
  - As before, calibration certificate specific for customer
  - max. 2 weeks old calibration guaranteed



PROFESSIONAL MEASURING

180 JAHRE  
seit 1844  
KERN & SOHN

**KERN**

# THANK YOU FOR YOUR ATTENTION

TO FURTHER SUCCESSFUL COOPERATION

