### KERN & SOHN – The wide range of product champion that is situated in the Swabian Alb

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ΕN

food

and .

NCES & TEST SERVICE for

ΕN

# **BALANCES &** TEST SERVICE

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KERNA

for laboratory, industry and food industry

### Discover the vast world of scales and measuring technology from KERN online: kern-sohn.com



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OUT NOW: THE NEW KERN EASYTOUCH APP

PROFESSIONAL MEASURING

#### How do I quickly find the product I am looking for?

The tried and tested quick search system – "Quick-Finder" ahead of each product group allows you to base the search for a certain target group on weighing data you need such as readout, weighing capacity and main features for each model.

And it's as simple as that – find the product you want in 2 steps:

- 1. Go to the product group index on page 3
- 2. Pick the appropriate product group and find the product you want using the Quick-Finder.

... or use the model name and find the product quickly and efficiently using the A-Z model list:

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0,001	300	EWJ 300-3H	26	1			•			1			
0,001	300	572-31	27	1									
0,001	300	PCD 300-3	21	1									
0,001	350	PCB 350-3	22	1									
0,001	350	KB 360-3N	25	1				-					
0,001	360		27	1									•
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0.001	420	PLJ 420-3F	30				-					•	•
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РСВ	
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#### **KERN Pictograms**



pictogram

### KERN – Measuring technology and testing services from a single source



from Monday to Friday

from 8:00 am to 6:00 pm

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

KERN

- pocket balances through to 12 t
- Find the product you want at

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.

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# NEWS 2022

In 2022 we have many new models for you in our program

#### Analytical balances KERN ADB

The price leader in analytical balances with internal or external adjustment - now as version with [Max] 220 g!

Further details > P. 34 from € 660,-



#### Analytical balances KERN ALS-A · ALJ-A

Analytical balance with high weighing capacity, graphic display and convenient recipe function – now also available as single-range semi-microbalance with incredibly high resolution

Further details > P. 35/36 from € 1100,-



#### Analytical balances KERN ABP

Premium analytical balance with the latest Single-Cell Generation for extremely rapid, stable weighing results – now also available as single-range semi-microbalance with incredibly high resolution

Further details > P. 40/41 from € 1890,-



#### Stainless steel platform scale KERN SXS



#### Price computing scale KERN RPB

Retail scale with memories for item prices – now with Checkout-Dialogue 06

Further details > P. 68

from € 225,-

Price computing scale KERN RFE

Compact portion scale with 2 XXL displays – weight, unit price, total price and TARE value at a glance

Further details > P. 69 only € 320,-



#### **Counting system KERN CCA**

High-resolution counting system with EC type approval to count the smallest parts in large quantities, maximum number of parts which can be displayed is 999,999 - many new models now

Further details > P. 80/81 from € 940,-

#### Industrial platform scale KERN IOC

Allround platform scale with a wide range of communication options and EC type approval [M] – now also available as high-resolution version with fine display

Further details > P. 95/96 from € 305,-

#### Floor scales KERN BID/BID-D

Floor scale with EC type approval [M] and the best price-to-performance ratio – now also as high-resolution dual-range balance

Further details > P. 105/106 from € 1070,- Anti-vibration plates KERN YPS-04, -05, -06

Anti-vibration plates for absorbing shocks and vibrations. Ideal for vibration-free installation of precision balances, analytical balances or microscopes

Further details > P. 173 from € 500,-

All prices listed here are without german legal VAT (19%)



Compatible models are now marked in the catalogue with the EasyTouch symbol. Detailed information > Page 123 – 127

### **Do you have questions about our products? Our customer consultants will be pleased to assist you:**

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### **KERN Hotlines**

#### +49 7433 9933-...

Service hotline	199	for general technical questions about your KERN or SAUTER product
System solutions Industry 4.0	200	for all technical questions concerning the interlocking of the latest information and communication technology with our scales, measuring cells and measuring devices as well as questions about KERN software
Industrial scales	333	for all technical questions concerning our basic scales (laboratory & industry), pocket balances, school balances, bench scales, price-computing scales, platform scales, counting scales, counting systems, floor scales, pallet truck scales, crane scales
Laboratory and analytical balances	444	for all technical questions concerning our high quality precision balances, analytical balances (especially with electromagnetic force-compensated measuring systems, tuning fork and high application density)
Medical scales	499	for all technical questions concerning our baby scales, personal scales, handrail scales, chair scales, wheelchair scales, dynanometers
SAUTER measuring instruments	555	for all technical questions concerning our SAUTER measuring instruments, test benches, force measuring accessories (clamps etc.), SAUTER software
Moisture analysers	599	for all technical questions concerning our moisture analysers
Optical devices	777	for all technical questions concerning our microscopes, microscope cameras, refractometers, etc.

### KERN TGC Page 9

- > High-resolution pocket balance
- > Fast response and settling time
- > Particularly flat design
- > Stainless steel weighing plate

only € 19,80 \* Price/unit, excl. of VAT ex works, only available in a set of 5 units

### **Pocket** balances

#### **Pocket size precision**

Pocket balances are the ideal helpers whenever mobility and high precision are required. Since they have fewer keys, operation is simple and fast. Different weighing units stored in the pocket balance, such as g, oz, ct, gn, etc., make them universally usable. An integrated calculator allows you to use the measured weight immediately in calculations, to e.g. determine a price, quantity, average value and much more. Compact in size and well protected with a flap or protective cover, which can be used as a convenient taring container, the pocket balance is always a useful tool for mobile weighing.

- · In production, to control of production weights or during the picking of small parts
- In quality control for the quick testing of small parts like plastic parts from injection moulding machines, milled parts, screws, etc.
- For mobile weighing, on-site sampling, and fast analysis wherever there's no power outlet
- · In hobbies and sports, e.g. when filling black powder, weighing parts from modelling kits etc.
- · In commerce, for the fast determination of the weights of coins, jewellery, precious stones, etc.
- In veterinary sector for the weighing of small animals, the mixing of food, etc.
- In the food sector for the preparation of spice or tea mixes, for the weighing of food in line with a diet sheet.

#### **Quick-Finder Pocket balances**

Readability [d]	Weighing capacity [Max]	Model	Price excl. of VAT ex works	Page	DAYS	CAL EXT	BATT
g	g	KERN	€		F	or an explanation on the pict	os, see front flap
0,001	50	TGD 50-3CS05 🏶	260,-*	10	1	•	•
0,002	10	CM 50-C2N 🖤	95,-	10	1	•	•
0,01	60	CM 60-2N	85,-	9	1	•	•
0,01	150	TGC 150-2805	99,-*	9	1	•	•
0,1	150	TEE 150-1	45,-	9	1	•	•
0,1	150	CM 150-1N	55,-	9	1	•	•
0,1	320	CM 320-1N	58,-	9	1	•	•
0,1	500	TGC 500-1S05	99,-*	9	1	•	•
1	1000	CM 1K1N	55,-	9	1	•	•
1	1000	TGC 1K-3S05	99,-*	9	1	•	•
		*P	rice set of 5 units		= Carat bala	nces • = standa	rd <b>o</b> = option

#### Pocket balances KERN TEE · CM · TGC



#### **KERN TEE**

Designer pocket balance at a bargain price



KERN CM

Pocket balance with integrated pocket calculator



**KERN TGC** 

Slim pocket balance with large stainless steel weighing plate and practical tare pan

01





• Simple and convenient 2-key operation

• Cover made of shock proof plastic as protection against pressure and dust. Can also be used as a tare cup





- Simple and convenient 4-key operation
- Hard case cover as protection against pressure and dust
- Robust, handy, well protected
- Integrated calculator





- High-resolution pocket balance with particularly rapid reaction and stabilisation time, which means that you can work extremely efficiently.
- Particularly flat design
- Cover made of shock proof plastic as protection against pressure and dust. Can also be used as a tare cup
- · Stainless steel weighing plate, which makes cleaning easy and hygienic
- **Note:** The models are only delivered in a set of 5 units. That means the prices given in the table refer to a delivery of 5 units. Cannot be delivered individually. The calibration prices given here refer to calibration of a single balance

**Tip:** KERN pocket scales are also ideal as a customer gift or for personolised marketing and sales campaigns. We are happy to print your logo on the cover, the lid or the packaging, up from 100 pieces. Please inquire details

KERN	TEE 150-1*	CM 60-2N	CM 150-1N	CM 320-1N	CM 1K1N	TGC 150-2805	TGC 500-1S05	TGC 1K-3S05			
Weighing capacity [Max] g	150 g	60 g	150 g	320 g	1000 g	150 g	500 g	1000 g			
Readability [d]	0,1 g	0,01 g	0,1 g	0,1 g	1 g	0,01 g	0,1 g	1 g			
LCD display	backlit, digit height 9 mm		backlit, digit l	neight 12 mm	back	lit, digit height 12	2 mm				
Dimensions of weighing plate	W×D 60×64 mm		W×D 70	×80 mm	ø 81 mm						
Overall dimensions	W×D×H 67×100×22 mm			D×H ×25 mm	W×D×H 100×130×18 mm						
Power supply	Batteries included, 2×1,5 V AAA, operating time up to 50 h	AUTC	2×1,5 O-OFF function to	included, V AAA, preserve batter ne up to 33 h	Batteries included, 2× CR2032, operating time up to 33 h						
Net weight	100 g		18	0 g			200 g				
Permissible ambient temperature			5 °C/35 °C	0 °C/40 °C							
Price €, excl. of VAT, ex works	45,-	85,-	55,-	58,-	55,-	99,-**	99,-**	99,-**			
<b>Option DAkkS Calibr. Certificate</b>		963-127, 82									

\* ONLY WHILE STOCKS LAST!

www.kern-sohn.com · Order hotline +49 7433 9933-0

\*\* Price set of 5 units excl. of VAT exworks

#### Pocket carat balances KERN CM-C · TGD



#### **KERN CM-C**

Pocket balance with carat display - ideal for jewellers



**KERN TGD** 

STANDARD

Compact pocket carat balance for precision weighing of jewellery and precious stones

OPTION

DAkk





- Hard case cover as protection against pressure and dust
- · Adjusting weight standard
- Draft shield against air movements standard
- Weighing pan standard

- (TTT) BATT CAL EXT -3 DAY
- · Simple and convenient 4-key operation
- Can be switched over from g to ct, gn, dwt, ozt, oz at the touch of a key
- Innovative touchscreen: Large touch-sensitive, backlit touch display with very good contrast for easy operation and convenient reading
- Hard case cover as protection against pressure and dust
- · Stainless steel weighing plate, which makes cleaning easy and hygienic
- Weighing pan standard
- · Powder scale with Grain division (gn), ideal for sport shooters, reloaders etc. for self-filling cartridge cases
- USB cable for power supply as standard
- 1 Delivered in appealing packaging
- Note: The models are only delivered in a set of 5 units. That means the prices given in the table refer to a delivery of 5 units. Cannot be delivered individually. The calibration prices given here refer to calibration of a single balance

Tip: KERN pocket scales are also ideal as a customer gift or for personolised marketing and sales campaigns. We are happy to print your logo on the cover, the lid or the packaging, up from 100 pieces. Please inquire details

KERN	CM 50-C2N*	TGD 50-3CS05				
Weighing capacity [Max] g	10 g   50 ct	50 g   250 ct				
Readability [d]	0,002 g   0,01 ct	0,001 g   0,005 ct				
LCD display	digit height 9 mm	backlit, digit height 12 mm				
Dimensions of weighing plate	W×D 50×40 mm	ø 65 mm				
Overall dimensions	W×D×H 85×130×25 mm	W×D×H 96×149×36 mm				
Power supply	Batteries included, 2×1,5 V AAA, AUTO-OFF function to preserve battery life, can be switched off, operating time up to 30 h	Batteries included, 4×1,5 V AAA, operating time up to 150 h without backlight				
Net weight	200	g				
Permissible ambient temperature	5 °C/35 °C	5 °C/35 °C				
Price €, excl. of VAT, ex works	95,-	260,-**				
Option DAkkS Calibr. Certificate	963-127, 82,-					

\* ONLY WHILE STOCKS LAST!

10 Pocket balances \*\*Price set of 5 units excl. of VAT exworks



### KERN EHA Page 16

- > Large, shock-resistant stainless steel weighing plate
- > Particularly flat design
- > Large, bright LCD display
- > Simple operation, suitable for school and teaching use

### **School balances**

As entry-level models, KERN school balances cover the most important basic applications of laboratory balances and offer simple operation, easy readability and an optimal price-performance ratio. The KERN School balances can be used flexibly and independent of location thanks to battery operation and are therefore the ideal choice for school or teaching purposes.

Our recommendation: Brand new in our product range is the school balance EHA, a real and affordable all-rounder for laboratory, industry and teaching purposes.

### **Quick-Finder School balances**

Readability	Weighing capacity	Model	Price excl. of VAT	Page	DAYS	CAL EXT	• 6000 • RS 232	PCS	RECIPE	BATT	
[d]	[Max]		ex works		DATS	CALLAT	NO LOL		NECH E		
g	g	KERN	€			For an explanation on the pictos, see front flap					
0,001	100	EMB 100-3	215,-	13	1	•				•	
0,001	200	EMB 200-3	235,-	13	1	•					
0,001	200	EMB 200-3V	260,-	14	1	•	•			•	
0,001	300	EMS 300-3	285,-	15	1	•		•	•	•	
0,01	200	EMB 200-2	130,-	13	1	•				•	
0,01	500	EMB 500-2S	115,-	12	1	•					
0,01	500	EHA 500-2	90,-	16	1	•		•			
0,01	600	EMB 600-2	170,-	13	1	•				•	
0,01	1000	EMB 1000-2	210,-	13	1	•				•	
0,01	2000	EMB 2000-2	225,-	13	1	•				•	
0,01	2000	EMB 2000-2V	260,-	14	1	٠	•			•	
0,01	3000	EMS 3000-2	250,-	15	1	•		•	•	-	
0,1	200	EMB 200-1SS05	150,-*	12	1	•				•	
0,1	500	EMB 500-1SS05	170,-*	12	1	•				•	
0,1	500	EMB 500-1	55,-	13	1	•				•	
0,1	500	EMB 500-1BE	55,-	13	1	•				•	
0,1	500	EHA 500-1	65,-	16	1	٠		•			
0,1	1000	EHA 1000-1	65,-	16	1	•		•		•	
0,1	1200	EMB 1200-1	79,-	13	1	•				•	
0,1	3000	EMB 3000-1	130,-	13	1	•				•	
0,1	3000	EMB 3000-1S	99,-	12	1	٠				•	
0,1	3000	EHA 3000-1	90,-	16	1	•		•		•	
0,1	6000	EMB 6000-1	170,-	13	1	٠				•	
0,1	6000	EMS 6K0.1	175,-	15	1	•		•	•	•	
0,1	12000	EMS 12K0.1	220,-	15	1	٠		•	•	•	
1	2000	EMB 2000-0SS05	150,-*	12	1	•				•	
1	2200	EMB 2200-0	57,-	13	1	•				•	
1	3000	EHA 3000-0	65,-	16	1	•		•		•	
1	5000	EMB 5000-0SS05	170,-*	12	1	•				•	
1	5200	EMB 5.2K1	60,-	13	1	•				•	
1	6000	EMS 6K1	87,-	15	1	٠		•	•		
1	12000	EMS 12K1	95,-	15	1	٠		٠	•	•	
5	5200	EMB 5.2K5	55,-	13	1	•				•	



-S05



The price breaker! Most economical School balance in

Price/unit, excl. of VAT ex works, only available in a set of 5 units

the KERN assortment

from €





## The space miracle – stackable school balance for experiment-based teaching

#### Features

02

- Simple and convenient 2-key operation
- Tare function facilitates formulation work
- · Particularly flat design
- Secure and non-slip positioning through
   rubber feet
- 11 Stackable for space-saving storage
- A practical transport safety lock prevents the weighing technology from being overloaded when stacked, stored or during transportation

#### **Technical data**

- Large LCD display, digit height 15 mm
- Dimensions of weighing surface, plastic,
- Ø 120 mm
- Overall dimensions W×D×H 145×205×45 mm
- Optional battery operation, 2×1.5 V AA, standard, operating time up to 35 h, AUTO-OFF function to preserve the battery
- Net weight 2,0 kg
- Permissible ambient temperature 5  $^\circ\text{C}/35$   $^\circ\text{C}$
- Note: The models are only delivered in a set of 5 units. i.e. the price given in the table refers to a delivery of 5 items. Cannot be delivered individually. The calibration prices given here refer to calibration of a single balance

#### Accessories

 External universal mains adapter, with universal input and optional input socket adapters for EU, GB, USA, KERN YKA-03N, € 35,-

STANDAR	OPTION				
Ĩ.	$\mathcal{C}$				<mark>в 🚢</mark>
CAL EXT	UNIT	BATT	DMS	1 DAY	MULTI

Model	Weighing	Readability	Reproducibility	Linearity	Quantity	Price	Option		Quantity
	capacity	F.11			delivered		DAkkS Calibr. Ce	rtificate	
KERN	[Max] g	[d] g	g	g	(balance)	ex works €	DAkkS KERN	€	(DAkkS Calibr. Certificate)
EMB 500-2S	500	0,01	0,02	± 0,03	1	115,-	963-127	82,-	1
EMB 200-1SS05	200	0,1	0,2	± 0,3	5	150,-*	963-127	82,-	1
EMB 500-1SS05	500	0,1	0,2	± 0,3	5	170,-*	963-127	82,-	1
EMB 3000-1S	3000	0,1	0,2	± 0,3	1	99,-	963-127	82,-	1
EMB 2000-0SS05	2000	1	2	± 3	5	150,-*	963-127	82,-	1
EMB 5000-0SS05	5000	1	2	± 3	5	170,-*	963-127	82,-	1

ONLY WHILE STOCKS LAST!

\* Price set of 5 units



#### Entry level laboratory balance with tremendous weighing performance

#### Features

- · Simple and convenient 2-key operation
- Tare function facilitates formulation work
- · Particularly flat design
- · Ready for use: Batteries included
- 11 Ring-shaped draught shield standard, only for models with weighing plate size **A**, weighing space Ø×H 96×35 mm
- Hook for underfloor weighing standard
- 2 Also available as KERN EMB 500-1BE **Black Edition**
- Note: With the optional auxiliary set for density determination KERN YDB-04 also well suited for school and teaching operation.

#### **Technical data**

- Large LCD display, digit height 15 mm
- Dimensions weighing surface
  - A Ø 82 mm
  - Ø 105 mm
- Ø 150 mm, see larger picture
- · Weighing plate material A plastic, with conductive lacquer B, C plastic
- Net weight approx. 0,85 kg
- · Batteries included, 9 V block, respectively 2×1.5 V AA
- Permissible ambient temperature 5 °C/35 °C

#### Accessories

- Stainless steel weighing plate, only for models with weighing plate size **B**, KERN EMB-A02, € 28,-
- External universal mains adapter, with universal input and optional input socket adapters for EU, GB, USA, KERN YKA-03N, € 35,-
- **I** Ancillary kit for density determination of liquids and solids with density > 1. Scope of supplies: Bridge for holding the beaker (Ø 102 mm), hook (H 139 mm), suitable for models with weighing plate size ▲, KERN YDB-04, € 40,-

STANDARD		OPTION					
CAL EXT			BATT	DMS	1 DAY		DAkks +3 Days

Model	Weighing	Readability	Reproducibility	Linearity	Housing	Weighing plate	Price	Option	
	capacity				dimensions		excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]			W×D×H		ex works	DAkkS	
KERN	g	g	g	g	mm		€	KERN	€
EMB 100-3	100	0,001	0,001	± 0,005	170×244×54	А	215,-	963-127	82,-
EMB 200-3	200	0,001	0,001	± 0,005	170×244×54	А	235,-	963-127	82,-
EMB 200-2	200	0,01	0,01	± 0,02	170×244×39	В	130,-	963-127	82,-
EMB 600-2	600	0,01	0,01	± 0,03	170×244×39	В	170,-	963-127	82,-
EMB 1000-2	1000	0,01	0,01	± 0,05	170×244×54	С	210,-	963-127	82,-
EMB 2000-2	2000	0,01	0,01	± 0,05	170×244×54	С	225,-	963-127	82,-
EMB 500-1	500	0,1	0,1	± 0,2	170×244×39	С	55,-	963-127	82,-
EMB 500-1BE	500	0,1	0,1	± 0,2	170×244×39	С	55,-	963-127	82,-
EMB 1200-1	1200	0,1	0,1	± 0,3	170×244×39	С	79,-	963-127	82,-
EMB 3000-1	3000	0,1	0,1	± 0,3	170×244×39	С	130,-	963-127	82,-
EMB 6000-1	6000	0,1	0,1	± 0,3	170×244×39	С	170,-	963-128	99,-
EMB 2200-0	2200	1	1	± 2	170×244×39	С	57,-	963-127	82,-
EMB 5.2K1	5200	1	1	± 3	170×244×39	С	60,-	963-128	99,-
EMB 5.2K5	5200	5	5	± 10	170×244×39	С	55,-	963-128	99,-





02













#### School balance with integrated density determination function

#### Features

02

- Easy density determination made easy! Thanks to the self-explanatory, graphic-assisted control panel, the density of solids and liquids can be determined in seconds, making them ideal for use in schools and universities
- Self-explanatory graphic control panel, the workings steps can be understood immediately, even without operating instructions
- no learning time = reduces costs
- ideal for untrained users
- visualised process avoids operating errors
- The 4 steps are carried out from left to right:
  Tare the balance by pressing the [TARE] key
  Select density determination mode (solids/liquids)

 Weighing of samples/plummets in air
 Weighing of samples/plummets in liquid. The density will be shown on the display right away

- Particularly flat design
- Hook for underfloor weighing standard
- Ready for use: Batteries included, 9 V block, operating time up to 12 h, AUTO-OFF function preserves the battery
- **Note:** Balance and appropriate set for density determination should be ordered at the same time, see accessories

STANDARD	)							OPTION
	• 6884.*	$\mathcal{C}$	<b>É</b>		в			DAkkS
CAL EXT	RS 232	UNIT	UNDER	BATT	MULTI	DMS	1 DAY	+3 DAYS

#### **Technical data**

- Large LCD display, digit height 15 mm
- Dimensions weighing surface, plastic
- A Ø 82 mm
- Ø 150 mm, see larger picture
- Overall dimensions W×D×H 175×245×54 mm
- Net weight approx. 0,85 kg
- Permissible ambient temperature 5 °C/35 °C
- Now also with carat weighing unit: EMB 200-3V: 1000 ct/0,005 ct

#### Accessories

#### KERN EMB 200-3V:

- I Ancillary kit for density determination of liquids and solids with density > 1. Scope of supplies: Bridge for holding the beaker (Ø 102 mm), hook (H 139 mm), suitable for models with weighing plate size II, KERN YDB-04, € 24,-
- Iset for density determination of liquids and solids with density ≤/≥ 1. Scope of delivery: Weighing plate, beaker (Hר 71×51 mm), sample holder, plummet, KERN YDB-01, € 220,-
- DAkkS-Calibration certificate for the plummet (20 g), KERN 962-335V, € 157,-

#### KERN EMB 2000-2V:

- I Set for density determination of liquids and solids with density ≤/≥ 1. Scope of delivery: Weighing plate, beaker (Hר 135×100 mm), sample holder, plummet KERN YDB-02, € 330,-
- DAkkS-Calibration certificate for the plummet (200 g), KERN 962-338V, € 155,-

Model	Weighing capacity	Readability	Reproducibility	Linearity	Weighing plate	Price	Option	
						excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]				ex works	DAkkS	
KERN	g	g	g	g		€	KERN	€
EMB 200-3V	200	0,001	0,002	± 0,005	А	260,-	963-127	82,-
EMB 2000-2V	2000	0,01	0,02	± 0,05	В	260,-	963-127	82,-

#### SCHOOL ★★★



02



### Entry level model in the low-cost range with large weighing plate

#### Features

- Especially suitable for use in schools and universities, for example for biology, chemistry, physics
- Large, shock proof weighing plate made of plastic, with conductive lacquer
- Particularly flat design
- Ergonomically optimised key pad with large keys and a high-contrast LCD display
- Secure and non-slip positioning through
   rubber feet
- Adjusting program CAL for quick setting of the balance accuracy, external test weights at an additional price, see *Test weights*
- Draught shield standard for models with weighing plate size A, weighing space
   W×D×H 145×145×65 mm
- Suitable for common school LIMS systems

#### Technical data

- · LCD display, digit height 25 mm
- Dimensions of weighing surface,
   Ø 105 mm
- W×D 175×190 mm, see larger pictureWeighing plate material
- plastic, with conductive lacquerplastic
- Overall dimensions W×D×H
   200×280×63 mm (without draught shield)
- Optional battery operation, 9 V block not included in scope of delivery, operating time up to 40 h
- External mains adapter standard
- Net weight approx. 1,4 kg
- Permissible ambient temperature 5 °C/35 °C

#### Accessories

 I Stainless steel weighing plate, only for models with weighing plate size I, KERN EMS-A01, € 30,-

STANDARD								OPTION
Ť .å.	Å	%	$\mathcal{C}$		B			DAkkS
CAL EXT PCS	RECIPE	PERCENT	UNIT	BATT	MULTI	DMS	1 DAY	+3 DAYS

Model	Weighing	Readability	Reproducibility	Linearity	Weighing plate	Price	Option	
	capacity					excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]				ex works	DAkkS	
KERN	g	g	g	g		€	KERN	€
EMS 300-3	300	0,001	0,002	± 0,005	A	285,-	963-127	82,-
EMS 3000-2	3000	0,01	0,02	± 0,05	В	250,-	963-127	82,-
EMS 6K0.1	6000	0,1	0,1	± 0,3	В	175,-	963-128	99,-
EMS 12K0.1	12000	0,1	0,1	± 0,3	В	220,-	963-128	99,-
EMS 6K1	6000	1	1	± 3	В	87,-	963-128	99,-
EMS 12K1	12000	1	1	± 3	В	95,-	963-128	99,-



The compact all-round model with robust stainless steel weighing plate for us in laboratories, industries and for teaching

#### Features

- Thanks to its compact, robust design, its bright display and high precision, this range is ideal for use in laboratories, quality control, production as well in schools and universities for teaching e.g. biology, chemistry and physics
- Large, shock proof weighing plate made from stainless steel, can be removed and therefore is hygienic and easy to clean
- Particularly flat design
- Ergonomically-optimised key pad with large keys and a high-contrast LCD screen
- Secure and non-slip positioning through rubber feet
- Level indicator and levelling feet for precise levelling of the scale, fitted as standard, to give the most accurate weighing result
- Adjusting program CAL for quick setting of the balance accuracy using an external test weight at an additional price, see *test weights*

#### **Technical data**

- Backlit LCD display, digit height 22 mm
- Dimensions of weighing surface, stainless steel
   Ø 105 mm
- W×D 120×120 mm, see larger picture
  Overall dimensions W×D×H
- 225×160×50 mm (without draught shield) • Optional battery operation, 2×1.5 V AA not
- included in scope of delivery, operating time up to 70 h
- · External mains adapter standard
- Net weight 0,50 kg
- Permissible ambient temperature 5  $^\circ\text{C}/40$   $^\circ\text{C}$

STANDARD	)						OPTION
CAL EXT	PCS		BATT		DMS	1 DAY	DAkkS +3 DAYS
CAL EXT	PCS	UNIT	BATT	MULTI	DMS	1 DAY	+3 DAYS

Model	Weighing capacity	Readability	Reproducibility	Linearity	Weighing plate	Price	Option	
						excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]				ex works	DAkkS	
KERN	g	g	g	g		€	KERN	€
EHA 500-2	500	0,01	0,03	± 0,02	А	90,-	963-127	82,-
EHA 500-1	500	0,1	0,3	± 0,2	А	65,-	963-127	82,-
EHA 1000-1	1000	0,1	0,3	± 0,2	В	65,-	963-127	82,-
EHA 3000-1	3000	0,1	0,3	± 0,3	В	90,-	963-127	82,-
EHA 3000-0	3000	1	3	± 2	В	65,-	963-127	82,-

6 (C ]

### KERN PNS/PNJ Page 29

- > Excellent tuning fork weighing system
- > Easy to use
- Automatic external and internal adjustment
- > Capacity display

### **Precision balances**

111

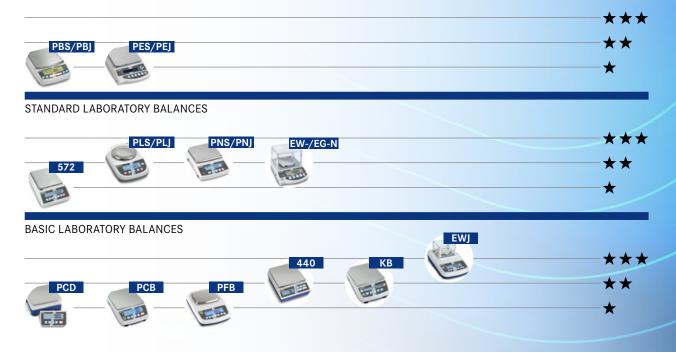
Here you'll find a complete summary of the KERN laboratory scales series and their positioning within the precision scales segment on the basis of application, price-performance ratio and functional volume

from €

620,-

#### PREMIUM LABORATORY BALANCES

KERN



03

### **Precision balances**

#### **KERN school balances**

are entry-level devices in the field of laboratory balances, and they cover basic applications. They feature simple operation and the very best price/performance ratio. In addition they usually can be stacked and can also be operated by battery, as an alternative to mains power, which means that they have the flexibility to be used in different locations. See school balances

#### **KERN Basic laboratory balances**

are used in laboratory applications mostly as single-user balances for sample preparation, etc. They are fitted with all useful laboratory functions which will support the user in a helpful way. With their strain gauge measuring principle, they are used anywhere where individual weighings are carried out, such as, for example, checkweighing. These devices are often connected to printers or local Pcs using the standard, integrated RS-232 data interface.

#### KERN Basic standard laboratory balances

offer you all the tools you would need for effective and accurate work in your laboratory environment. All important laboratory functions such as a recipe weighing function or data interfaces are on board at all times. But above all, the high-quality measuring principles of these balances such as force compensation or tuning fork measuring principle, allow them to be used in dosing procedures with very small weight changes and rapid display. In addition these balances are often fitted with automatic internal adjustment, which permits calibrated operation and means the balance can be used in any location.

#### **KERN** premium laboratory balances

are right at the top of the precision balance segment. The numerous equipment features of the standard balances are complemented by high-quality materials with robust, sturdy construction, high-quality, high-performance weighing systems, optimised operating sequences, speed benefits Tip: Together with the innovative KERN EasyTouch app, a premium laboratory balance supports its users in their typical workflows and increases the range of functions of the balance. In this way these scales can be operated more efficiently and quickly than devices from other quality classes. In particular these balances are used in demanding laboratory applications and anywhere where the environmental conditions are not ideal because of vibrations or other interference, but where, naturally, the balance is expected to provide accurate weighing results. Another field of application for these balances is the pharmaceutical industry, which is subject to particularly demanding requirements and authorities such as, for example, the FDA (Food and Drug Administration).

# Тір



Transform your weighing system into a powerful weighing system! Using the KERN EasyTouch App even a simple scale can be made into a powerful weighing system, which offers a wide range of functions. You simply have to install the KERN EasyTouch App on your PC or tablet (Windows<sup>®</sup> or Android<sup>®</sup>), connect the balance (either with cable or wireless), activate the App and straightaway you will be able to control your balance using your PC or tablet. All details on page 127

If you have further questions on the subject of "Which balance will be best for my application?", then please ask your personal KERN segment specialists who will be happy to help you.

### **Quick-Finder Precision balances**

Readability	Weighing capacity	Model	Price excl. of VAT	Page		Μ		Ĩ.		GLP	GLP	<u>.</u>	-√+ ⊙ 🤊 ୬		
[d]	[Max]		ex works		DAYS		CAL INT	CAL EXT	RS 232	INTERN	PRINTER	PCS	TOL	BATT	ACCU
g	g	KERN	€				Fo	or an exp	lanation	on the p	ictos, se	e front fl	ар		
0,001	60	440-21A	350,-	24	1			٠	٠		٠	٠		•	0
0,001	100	PCB 100-3	305,-	22	1		_	•	•		•	•		•	0
0,001	120 120	PFB 120-3 KB 120-3N	330,-	23 25	1			•	•		•	•			0
0,001	200	PFB 200-3	<u> </u>	23	1							•			
0,001	220	EW 220-3NM	700,-	30	1			•	•		•	•	•		0
0,001	220	EG 220-3NM	850,-	30	1	0	•		•		•	•	•		0
0,001	240	KB 240-3N	350,-	25	1			٠	٠		۲	٠			0
0,001	240	572-30	560,-	27	1			۲	٠		٠				0
0,001	250	PCD 250-3	330,-	21	1			٠	•		٠	•		•	0
0,001	250	PCB 250-3	320,-	22	1			•	•		•	•		•	0
0,001	300 300	PFB 300-3 EWJ 300-3	<u> </u>	23 26	1		•	•				•			0
0,001	300	EWJ 300-3H	550,-	26	1		•		•		•	•			
0,001	300	572-31	580,-	27	1			•	•		•	•			0
0,001	350	PCD 300-3	360,-	21	1			•	٠		٠	•		•	0
0,001	350	PCB 350-3	350,-	22	1			٠	٠		٠	•		•	0
0,001	360	KB 360-3N	360,-	25	1			٠	•	_	•	•	-		0
0,001	420	572-32	630,-	27	1			•	•		•	•			0
0,001	420	PLS 420-3F	680,-	28	1			•	•	•		•	•		
0,001	420 420	PLJ 420-3F	790, 770,-	28 30	1		•	•	•	•	•	•	•		
0,001	420	EW 420-3NM EG 420-3NM	920,-	30	1	0	•	•	•	-	•	•	•		<u> </u>
0,001	620	PNS 600-3	680,-	29	1		-	•	•		•	•			
0,001	620	PNJ 600-3M	810,-	29	1	0	•		•	•		•		-	
0,001	620	EW 620-3NM	860,-	30	1			٠	٠		٠	•	•		0
0,001	620	EG 620-3NM	1030,-	30	1	0	٠		٠		٠	•	٠		0
0,001	620	PBS 620-3M	1470,-	31	1			٠	٠	٠		•	٠		
0,001	620	PBJ 620-3M	1720,-	31	1	0	٠		٠	•		•	•		
0,001	620	PES 620-3M	1290,-	32	1			•	•		•	•	•		<u> </u>
0,001	620 720	PEJ 620-3M PLS 720-3A	1530,- 960,-	32 28	1	0	•	•	•	•	٠	•	•		0
0,001	720	PL3 720-3A PLJ 720-3A	1100,-	28	1		•					•			
0,001	720	PLJ 720-3AM	1150,-	28	1	0	•		•	•		•	•	-	
0,001	1200	PLS 1200-3A	1010,-	28	1			•	•	•		•	•		
0,001	1200	PLJ 1200-3A	1160,-	28	1		•		٠	•		•	•		
0,001	2100	PLJ 2000-3A	1690,-	28	1		٠		٠	٠		•	٠		
0,01	200	PCB 200-2	265,-	22	1			•	٠		•	•	-	•	0
0,01	200	440-33N	290,-	24	1			•	•		•	•			0
0,01	400 600	440-35N 440-35A	330,-	24 24	1				•		•	•			<u> </u>
0,01	600	PFB 600-2	<u> </u>	24	1						•	•			
0,01	600	EWJ 600-2SM	395,-	26	1	0	•	•	•				-		0
0,01	600	EWJ 600-2M	410,-	26	1	0	•		•		•	•			0
0,01	650	KB 650-2N	340,-	25	1			•	•		٠	•			0
0,01	650	573-34	580,-	27	1			٠	٠		٠	٠			0
0,01	820	EW 820-2NM	610,-	30	1			٠	•		•	•	٠		0
0,01	1000	PCB 1000-2	295,-	22	1			٠	•		٠	•	-	•	0
0,01	1200	PFB 1200-2	285,-	23	1			•	•		•	•	-		
0,01	1200 1600	KB 1200-2N 572-33	<u> </u>	25 27	1			•	•		•	•			<u> </u>
0,01	2000	PFB 2000-2		27	1						•	•	-		
0,01	2000	KB 2000-2N	340,-	25	1			•	•		•	•			0
0,01	2200	EW 2200-2NM	740,-	30	1			•	•		•	•	•		0
0,01	2200	EG 2200-2NM	890,-	30	1	0	•		•		٠	•	٠		0
0,01	2200	PES 2200-2M	920,-	32	1			۲	٠		٠	•	٠		0
0,01	2200	PEJ 2200-2M	1150,-	32	1	0	٠		•		•	•	•		0
0,01	2400	KB 2400-2N	350,-	25	1			•	•		•	•			0
0,01	2400	572-35	570,-	27	1			•	•		•	•		•	<u> </u>
0,01	2500 2500	PCD 2500-2 PCB 2500-2	<u> </u>	21 22	1						•	•			<u> </u>
0,01	3000	PFB 3000-2	330,-	22	1										
0,01	3000	EWJ 3000-2	450,-	26	1		•	-	•		•	•	-	-	0
0,01	3000	572-37	580,-	27	1			•	•		•	•			0
0,01	3200	PNS 3000-2	620,-	29	1			٠	٠		٠	٠			
0,01	3200	PNJ 3000-2M	770,-	29	1	0	٠		۲	•		٠			
0,01	3500	PCD 3000-2	360,-	21	1	-		•	•		•	•	-	•	<u> </u>
0,01	3500	PCB 3500-2	335,-	22	1				•		•	•	-	•	<u> </u>
0,01	3600 4200	KB 3600-2N 572-39	<u> </u>	25 27	1	_		•	•		•	•			<u> </u>
0,01	4200	PLS 4200-2F	670,-	27	1					•	-	•	•		
	1200	1 20 7200-21	0,0,-	20						-					

**o** = option

= standard

### **Quick-Finder Precision balances**

Readabili	capacity	Model	Price excl. of VAT	Page	DAYS	Μ	CAL INT	CAL EXT	RS 232	GLP INTERN	GLP PRINTER	PCS	-√+ ⊙ Ͽッ TOL	BATT	ACI
[d] g	[Max]		ex works €				Fo	r an exn	lanation	on the n	ictos se	e front fl	an		
	g	KERN		20						· ·	10103, 30		· .		
0,01	4200	PLJ 4200-2F	790,-	28	1		•		•	•		•	•		(
0,01	4200	EW 4200-2NM	760,-	30	1			•	•		•	•	-		
0,01	4200	EG 4200-2NM	970,-	30	1	0	•		•		•	•	•		
0,01	4200	PBS 4200-2M	1240,-	31	1			•	•	•		•	•		
0,01	4200	PBJ 4200-2M	1540,-	31	1	0	•		•	•		•	•		
0,01	4200	PES 4200-2M	1090,-	32	1			•	•		•	•	•		
0,01	4200	PEJ 4200-2M	1320,-	32	1	0	•		•		•	•	•		
0,01	6200	PLS 6200-2A	970,-	28	1			•	•	•		•	•		
0,01	6200	PLJ 6200-2A	1100,-	28	1		•			•		•	•		
0,01	6200	PLJ 6200-2AM	1150,-	28	1	0	•		•	•	-	•	•		
0,01	6200	EW 6200-2NM	890,-	30	1		•		•		•	•	•		
0,01	6200	PBS 6200-2M	1490,-	31	1			•	•	•		•	•		
0,01	6200	PBJ 6200-2M	1850,-	31	1	0	•		•	•		•	•		
0,01	6200	PES 6200-2M	1340,-	32	1			٠	•		•	•	•		
0,01	8200	PLS 8000-2A	1180,-	28	1			•	•	•		•	•		
0,05	6000	PFB 6000-2	290,-	23	1			٠	•		•	•			
0,05	10000	KB 10K0.05N	315,-	25	1			•	•		•	•			
0,05	12000	572-45	570,-	27	1			٠	•		•	•	-		
0,05	20000	572-55	610,-	27	1			•	•		•	•			
0,1	400	440-43N	215,-	24	1			•	•		•	•		•	
0,1	1000	PCB 1000-1	210,-	22	1			•	•		•	•		•	
0,1	1000	440-45N	245,-	24	1			•	•		•	•	-	•	
0,1	2000	PCB 2000-1	245,-	22	1			•	•		•	•		•	
0,1	2000	440-47N	270,-	24	1			•	•		•	•	-	•	
0,1	4000	440-49N	330,-	24	1			•	•		•	•		•	
0,1	6000	PCD 6K-4	270,-	21	1			•	•		•	•		•	
0,1	6000	PCB 6000-1	280,-	22	1			•	•		•	•		•	
0,1	6000	440-49A	365,-	24	1			•	•		•	•		•	
0,1	6000	PFB 6000-1	255,-	23	1			•	•			•			
0,1	6000	EWJ 6000-1SM	375,-	26	1	0	•				•	•			
0,1	6000	EWJ 6000-1M	390,-	26	1	0	٠		•			•			
0,1	6500	KB 6500-1N	340,-	25	1			٠	•		•	•			
0,1	6500	573-46	580,-	27	1			٠	•		•	•			
0,1	8200	PBJ 8200-1M	1520,-	31	1	0	•		•	•		•	•		
0,1	10000	PCD 10K0.1	270,-	21	1	-		٠	•		•	•	-	•	
0,1	10000	PCB 10000-1	290,-	22	1			•	•		•	•	-	•	
0,1	10000	KB 10000-1N	310,-	25	1			•	•		•	•			
0,1	10000	572-43	550,-	27	1			•	•			•			
0,1	12000	PNS 12000-1	620,-	29	1			•	•			•			
0,1	12000	PNJ 12000-1M	770,-	29	1	0	•		•	٠		•			
0,1	12000	EW 12000-1NM	710,-	30	1			۲	٠		٠	•	۲		
0,1	15000	PES 15000-1M	1270,-	32	1			٠	٠		٠	٠	٠		
0,1	16000	572-49	560,-	27	1			۲	۲		٠	٠			
0,1	20000	PLS 20000-1F	660,-	28	1			٠	٠	٠		٠	٠		
0,1	24000	572-57	570,-	27	1			٠	٠		٠	•			
0,1	31000	PES 31000-1M	2250,-	32	1			٠	•		۲	•	٠		
1	4000	440-51N	160,-	24	1			٠	•		٠	•		•	
1	6000	PCB 6000-0	185,-	22	1			•	•		٠	•		•	
1	6000	440-53N	210,-	24	1			٠	•		٠	•		•	
1	10000	PCD 10K-3	195,-	21	1			•	•			•		•	



# High-resolution precision balance with removable display for maximum flexibility

#### Features

STANDARD

.....

- Laboratory balance with separate platform: Ideal when working in a glove bag or fume cupboard. Particularly practical for weighing toxic, volatile or contaminated substances
- PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels
- Freely programmable weighing unit, e.g. display direct in special units such as length of thread g/m, paper weight g/m<sup>2</sup>, or similar
- Level indicator and levelling feet for precise levelling of the scale, fitted as standard, to give the most accurate weighing result
- Draught shield standard for models with weighing plate size A, weighing space
   W×D×H 146×146×80 mm
- Protective working cover included with delivery

#### **Technical data**

- Large backlit LCD display, digit height 21 mm
- Dimensions weighing surface
   Ø 105 mm
- W×D , see larger picture
- Weighing plate material
- I plastic, with conductive lacquerI Stainless Steel
- Dimensions of display device W×D×H 165×280×141 mm
- Optional battery operation, 9 V block not included in scope of delivery, operating time up to 12 h, AUTO-OFF function to preserve the battery
- Overall dimensions W×D×H, without draught shield 165×280×75 mm
- Cable length of display device approx. 1,2 m
- Net weight approx. 1,2 kg

BATT

- Permissible ambient temperature 5  $^\circ\text{C}/35$   $^\circ\text{C}$ 

OPTION

DAkkS

- Protective working cover over the display device, scope of delivery: 5 items, KERN PCD-A05S05, € 40,-
- I Stand to elevate display device, height of stand approx. 250 mm, KERN PCD-A03, € 60,-
- Internal rechargable battery pack, operating time up to 24 h without backlight, charging time approx. 10 h, KERN PCD-A04, € 55,-
- Is Foot switch, ideal when the application requires two free hands. TARE or PRINT function can be selected. Scope of delivery: foot switch, junction box, connection cable. For the PRINT function you will need the RS-232 interface cable, KERN YKF-01, € 90,-
- RS-232/Ethernet adapter for connection to an IP-based Ethernet network, KERN YKI-01, € 310,-
- Individual header data: the free software can be used to print 4 header lines on the printout when using printers 911-013, YKN-01, YKB-01N and YKE-01 (in combination with YKI-02)
- Further details, plenty of further accessories and suitable printers see *Accessories*

Model	Weighing	Readability	Reproducibility	Linearity	Weighing plate	Price	Option	
	capacity					excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]				ex works	DAkkS	
KERN	g	g	g	g		€	KERN	€
PCD 250-3	250	0,001	0,002	± 0,005	A	330,-	963-127	82,-
PCD 300-3	350	0,001	0,002	± 0,005	A	360,-	963-127	82,-
PCD 2500-2	2500	0,01	0,02	± 0,05	В	320,-	963-127	82,-
PCD 3000-2	3500	0,01	0,02	± 0,05	В	360,-	963-127	82,-
PCD 6K-4	6000	0,1	0,1	± 0,3	В	270,-	963-128	99,-
PCD 10K0.1	10000	0,1	0,1	± 0,3	В	270,-	963-128	99,-
PCD 10K-3	10000	1	1	± 3	В	195,-	963-128	99,-



#### The standard in laboratory

#### Features

03

- PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels
- Freely programmable weighing unit, e.g. display direct in special units such as length of thread g/m, paper weight g/m<sup>2</sup>, or similar
- With the recipe function you can weigh the different ingredients of a mixture. As a check, you can also call up the total weight of all the ingredients
- Plus/minus weighing procedures
- Protective working cover included with delivery

#### **Technical data**

- Backlit LCD display, digit height 15 mm
- Dimensions of weighing surface
  - A Ø 81 mm
  - 🖪 Ø 105 mm
  - C W×D 130×130 mm
- W×D 150×170 mm, see larger picture
  Weighing plate material
- plastic, with conductive lacquer
  G. D Stainless Steel
- Overall dimensions W×D×H 163×245×79 mm (without draught shield)
- Optional battery operation, 9 V block not included in scope of delivery, operating time up to 20 h, AUTO-OFF function to preserve the battery
- Permissible ambient temperature 5 °C/35 °C

- Protective working cover, scope of delivery:
   5 items, for models with weighing plate size
   KERN PCB-A02S05, € 40,-
  - KERN PCB-A03S05, € 40,-
  - KERN PCB-A04S05, € 40,-
  - KERN PCB-A05S05, € 40,-
- Internal rechargeable battery pack, operating time up to 48 h without backlight, charging time approx. 8 h, KERN PCB-A01, € 80,-
- RS-232/Ethernet adapter for connection to an IP-based Ethernet network, KERN YKI-01, € 310,-
- Balance Connection Software, KERN SCD-4.0, € 170,-
- Individual header data: the free software SHM-01 can be used to print 4 header lines on the printout when using printers 911-013, YKN-01, YKB-01N, YKE-01 and YKC-01 (in combination with YKI-02)
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD		 							OPTION		
CAL EXT RS 232 PRINT	ER PCS	% Percent	MOVE	UNDER	BATT	B MULTI	DMS	1 DAY	ET	ACCU	DAkkS +3 DAYS

Model	Weighing	Readability	Reproducibility	Linearity	Weighing plate	Price	Option	
	capacity	<b>1</b> .3				excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]				ex works	DAkkS	
KERN	g	g	g	g		€	KERN	€
PCB 100-3	100	0,001	0,001	± 0,003	A	305,-	963-127	82,-
PCB 250-3	250	0,001	0,001	± 0,005	A	320,-	963-127	82,-
PCB 350-3	350	0,001	0,002	± 0,005	A	350,-	963-127	82,-
PCB 200-2	200	0,01	0,01	± 0,02	В	265,-	963-127	82,-
PCB 1000-2	1000	0,01	0,01	± 0,03	C	295,-	963-127	82,-
PCB 2500-2	2500	0,01	0,01	± 0,05	C	330,-	963-127	82,-
PCB 3500-2	3500	0,01	0,02	± 0,05	C	335,-	963-127	82,-
PCB 1000-1	1000	0,1	0,1	± 0,2	C	210,-	963-127	82,-
PCB 2000-1	2000	0,1	0,1	± 0,2	C	245,-	963-127	82,-
PCB 6000-1	6000	0,1	0,1	± 0,3	D	280,-	963-128	99,-
PCB 10000-1	10000	0,1	0,1	± 0,3	D	290,-	963-128	99,-
PCB 6000-0	6000	1	1	± 2	D	185,-	963-128	99,-









## Quick-display precision balance with user-friendly concept of operation mode – now with larger housing for more stability

#### Features

- Easy to use: All primary functions have their own key on the keypad
- Compact size, practical for small spaces
- Capacity display: A bargraph display lights up to show how much of the weighing range is still available
- Level indicator and levelling feet for precise levelling of the scale, fitted as standard, to give the most accurate weighing result

#### Technical data

- Backlit LCD display, digit height 15 mmDimensions weighing surface, Stainless Steel
- Ø 80 mm ■ Ø 120 mm
- W×D 155×145 mm, see larger picture
- Overall dimensions W×D×H 210×315×90 mm (without draught shield)
- Net weight approx. 2,0 kg
- Permissible ambient temperature 15  $^\circ\text{C}/30$   $^\circ\text{C}$

- Protective working cover, scope of delivery: 5 items, KERN PFB-A12S05, € 40,-
- Separate second display, ideal for training and demonstration purposes in laboratories or industry, not permitted for direct sales to the public, KERN PFB-A08, € 125,-
- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase
- Bluetooth 2.0: KERN PFB-A10, € 95,-Bluetooth 4.0: KERN PFB-A11, € 130,-
- Further details, plenty of further accessories
- and suitable printers see Accessories

STANDARD	)									OPTION	FACTORY	
		KCP	GLP		<b>▲</b> ▲	%	C H			DAkkS	*	8
CAL EXT	RS 232	PROTOCOL	PRINTER	PCS	RECIPE	PERCENT	MULTI	DMS	1 DAY	+3 DAYS	BT 2.0	BT 4.0
											PFB-A10	PFB-A11

Model	Weighing capacity	Readability	Reproducibility	Linearity	Weighing plate	Price	Option	
						excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]				ex works	DAkkS	
KERN	g	g	g	g		€	KERN	€
PFB 120-3	120	0,001	0,001	± 0,003	А	330,-	963-127	82,-
PFB 200-3	200	0,001	0,002	± 0,005	А	340,-	963-127	82,-
PFB 300-3	300	0,001	0,002	± 0,005	А	375,-	963-127	82,-
PFB 600-2	600	0,01	0,01	± 0,03	В	270,-	963-127	82,-
PFB 1200-2	1200	0,01	0,01	± 0,03	В	285,-	963-127	82,-
PFB 2000-2	2000	0,01	0,02	± 0,05	В	310,-	963-127	82,-
PFB 3000-2	3000	0,01	0,02	± 0,05	В	330,-	963-127	82,-
PFB 6000-2	6000	0,05	0,05	± 0,15	C	290,-	963-128	99,-
PFB 6000-1	6000	0,1	0,1	± 0,3	C	255,-	963-128	99,-



#### The classic balance in the laboratory

#### Features

03

- Compact size, practical for small spaces
- Percentage determination: makes it possible to store a given weight value (100 %) and to determine deviations from this target value
- Protective working cover included with delivery

#### **Technical data**

- Backlit LCD display, digit height 15 mm
- Dimensions weighing surface
- A Ø 81 mm
- ₿ Ø 105 mm
- C W×D 130×130 mm
- W×D 150×170 mm, see larger pictureWeighing plate material
- plastic, with conductive lacquer, , D Stainless Steel
- Overall dimensions (without draught shield)
   W×D×H 165×230×80 mm
- Optional battery operation, 9 V block, standard, operating time up to 20 h, AUTO-OFF function to preserve the battery
- Net weight approx. 0,95 kg
- Permissible ambient temperature 5 °C/35 °C

- Protective working cover, scope of delivery: 5 items, for models with weighing plate size
  KERN 440-210-002S05, € 40,KERN 440-330-002S05, € 40,-
- I KERN 440-450-002S05, **€ 40,-**
- D KERN 440-530-002S05, **€ 40,-**
- Internal rechargable battery pack, operating time up to 20 h, without backlight, charging time approx. 10 h, KERN FCB-A01, € 50,-
- Hook for underfloor weighing, KERN 440-A01, € 25,-
- RS-232/Ethernet adapter for connection to an IP-based Ethernet network, KERN YKI-01, € 310,-
- Individual header data: the free software SHM-01 can be used to print 4 header lines on the printout when using printers 911-013, YKN-01, YKB-01N, YKE-01 and YKC-01 (in combination with YKI-02)
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD	 	 OPTION	
GLP CALEXT RS 232 PRINTER PCS		o <b>na ma</b>	DAkkS +3 DAYS

Model	Weighing capacity	Readability	Reproducibility	Linearity	Weighing plate	Price	Option	
						excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]				ex works	DAkkS	
KERN	g	g	g	g		€	KERN	€
440-21A	60	0,001	0,001	± 0,003	A	350,-	963-127	82,-
440-33N	200	0,01	0,01	± 0,02	В	290,-	963-127	82,-
440-35N	400	0,01	0,01	± 0,03	В	330,-	963-127	82,-
440-35A	600	0,01	0,01	± 0,03	В	365,-	963-127	82,-
440-43N	400	0,1	0,1	± 0,2	C	215,-	963-127	82,-
440-45N	1000	0,1	0,1	± 0,2	C	245,-	963-127	82,-
440-47N	2000	0,1	0,1	± 0,2	C	270,-	963-127	82,-
440-49N	4000	0,1	0,1	± 0,3	D	330,-	963-127	82,-
440-49A	6000	0,1	0,1	± 0,3	D	365,-	963-128	99,-
440-51N	4000	1	1	± 2	D	160,-	963-127	82,-
440-53N	6000	1	1	± 2	D	210,-	963-128	99,-



#### Compact precision balance with large weighing capacity

#### Features

- · Thanks to the many typical laboratory functions, such as, for example, recipe function, percentage determination, combined with the high level of precision, the KERN KB-N is a reliable partner for day-to-day work in the laboratory
- · User guidance step by step on display by Yes/No dialogue
- Freely programmable weighing unit, e.g. display direct in special units such as length of thread g/m, paper weight  $g/m^2$ , or similar
- · Ring-shaped draught shield standard, only for models with weighing plate size A, weighing space Ø×H 90×40 mm
- Model with resolution > 240,000 Pt.: Level indicator to level the balance precisely
- · Protective working cover included with delivery

STANDARD	 						OPTION	
CAL EXT RS 232		% PERCENT	MOVE		DMS	1 DAY	ACCU	DAkl +3 DAY

Model	Weighing	Readability	Reproducibility	Linearity	Weighing plate	Resolution	Price	Option	
	capacity						excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]					ex works	DAkkS	
KERN	g	g	g	g			€	KERN	€
KB 120-3N	120	0,001	0,001	± 0,003	A	120.000	325,-	963-127	82,-
KB 240-3N	240	0,001	0,001	± 0,003	A	240.000	350,-	963-127	82,-
KB 360-3N	360	0,001	0,002	± 0,005	A	360.000	360,-	963-127	82,-
KB 650-2N	650	0,01	0,01	± 0,03	В	65.000	340,-	963-127	82,-
KB 1200-2N	1200	0,01	0,01	± 0,03	В	120.000	310,-	963-127	82,-
KB 2000-2N	2000	0,01	0,01	± 0,03	В	200.000	340,-	963-127	82,-
KB 2400-2N	2400	0,01	0,01	± 0,03	В	240.000	350,-	963-127	82,-
KB 3600-2N	3600	0,01	0,02	± 0,05	В	360.000	360,-	963-127	82,-
KB 10K0.05N	10000	0,05	0,05	± 0,15	C	200.000	315,-	963-128	99,-
KB 6500-1N	6500	0,1	0,1	± 0,3	C	65.000	340,-	963-128	99,-
KB 10000-1N	10000	0,1	0,1	± 0,3	C	100.000	310,-	963-128	99,-

ONLY WHILE STOCKS LAST!

#### **Technical data**

- Backlit LCD display, digit height 9 mm
- · Dimensions of weighing surface Ø 81 mm, plastic, with conductive lacquer B W×D 130×130 mm, stainless steel W×D 150×170 mm, stainless steel, see larger picture
- Overall dimensions W×D×H 167×250×85 mm (without draught shield)
- Net weight 1,00 kg
- Permissible ambient temperature 10 °C/40 °C

- Protective working cover, scope of delivery: 5 items, for models with weighing plate size ■ KERN PCB-A02S05, € 40,-■ KERN PCB-A04S05, € 40,-
- KERN PCB-A05S05, € 40,-
- · Internal rechargeable battery pack, operating time up to 30 h without backlight, charging time approx. 10 h, KERN KB-A01N, € 55,-
- 1 Rechargeable battery pack external, operating time up to 30 h without backlight, charging time approx. 10 h, KERN KS-A01, € 160,-
- · Further details, plenty of further accessories and suitable printers see Accessories















## High-quality precision balance with automatic internal adjustment, also with EC type approval [M]

#### Features

03

- Easy to use: All primary functions have their own key on the keypad
- Automatic internal adjustment, time-controlled every 2 h, guarantees high degree of accuracy and makes the balance independent of its location
- Capacity display: A bargraph display lights up to show how much of the weighing range is still available
- KERN EWJ-H/-M: USB data interface for transferring weighing data to the PC
- KERN EWJ-SM: Cost-effective variant without data interfaces
- II KERN EWJ 300-3, 600-2M, 600-2M: Draught shield standard, weighing space W×D×H 134×128×80 mm
- I KERN EWJ 300-3H: Large glass draught shield with 3 sliding doors for easy access to the items being weighed. Weighing space W×D×H 155×175×217 mm

Protective working cover included with delivery

#### Technical data

- Large backlit LCD display, digit height 16,5 mm Dimensions weighing surface
- Ø 80 mm
  Ø 120 mm, see larger picture
  W×D 155×145 mm
- Overall dimensions W×D×H
   220×315×90 mm (without draught shield)\*
   220×340×180 mm (incl. draught shield)\*\*
   220×340×321 mm (incl. draught shield)\*\*\*
- Permissible ambient temperature KERN EWJ: 15 °C/35 °C KERN EWJ-M: 15 °C/30 °C

#### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN EWJ-A04S05, € 40,-
- Internal rechargeable battery pack, operating time up to 20 h without backlight, charging time approx. 12 h, KERN KFB-A01, € 35,-
- KERN EWJ-H/-M: Software BalanceConnection, for flexible recording or transmission of measured values, in particular also to Microsoft<sup>®</sup> Excel or Access
- RS-232/WiFi adapter for wireless connection to networks and WiFi capable devices, such as tablets, laptops or smartphones, KERN YKI-03, € 740,-
- RS-232/Ethernet adapter for connection to an IP-based Ethernet network, KERN YKI-01, € 310,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDAR	D										OPTION		FACTORY	
CAL INT	RS 232	USB	KCP PROTOCOL	GLP PRINTER	PCS	RECIPE	% PERCENT		DMS	1 DAY		DAkkS +3 DAYS	H3 DAYS	
	not FWI-SM	not FWI-SM	only EWJ -M/-SM										EWJ-M	

Model	Weighing	Readability	Verification	Minimal load	Linearity	Weighing	Price	Option			
	capacity		value			plate	excl. of VAT	Verification		DAkkS Calibr. Ce	ertificate
	[Max]	[d]	[e]	[Min]			ex works	MD		DAkkS	
KERN	g	g	g	g	g		€	KERN	€	KERN	€
EWJ 300-3**	300	0,001	-	-	± 0,005	A	490,-	-	-	963-127	82,-
EWJ 300-3H***	300	0,001	-	-	± 0,005	A	550,-	-	-	963-127	82,-
EWJ 3000-2*	3000	0,01	-	-	± 0,05	В	450,-	-	-	963-127	82,-

Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible. Verification at the factory, we need to know the full address of the location of use.

	vernication at the factory, we need to know the full address of the location of use.										
EWJ 600-2SM**	600	0,01	0,1	0,5	± 0,03	В	395,-	965-216	70,-	963-127	82,-
EWJ 600-2M**	600	0,01	0,1	0,5	± 0,03	В	410,-	965-216	70,-	963-127	82,-
EWJ 6000-1SM*	6000	0,1	1	5	± 0,3	С	375,-	965-217	82,-	963-128	99,-
EWJ 6000-1M*	6000	0,1	1	5	± 0,3	С	390,-	965-217	82,-	963-128	99,-



# All-rounder e.g. as precision balance in the laboratory or in harsh industrial applications

#### Features

- Thanks to the many typical laboratory functions, such as, for example, recipe function, percentage determination, GLP record keeping, combined with the high level of precision, the KERN 572 is a reliable partner for day-to-day work in the laboratory
- The robust version, typical industrial functions, such as piece-counting, vibrationfree weighing and the large weighing ranges also make these balances ideal for all industrial applications, where a high level of precision is required
- Freely programmable weighing unit, e.g. display direct in special units such as length of thread g/m, paper weight g/m<sup>2</sup>, or similar

- The robust aluminium diecast housing maintains the stability, protects the weighing technology elements and is robust enough to cope with everyday use
- Ring-shaped draught shield standard, only for models with weighing plate size A, weighing space Ø×H 157×43 mm
- Model with resolution > 240,000 Pt.: Level indicator to level the balance precisely
- Loop for underfloor weighing, standard for models with [d] < 0,01 g  $\,$
- Protective working cover included with delivery









#### Technical data

- Large backlit LCD display, digit height 18 mm
  Dimensions weighing surface, Stainless Steel
  - A Ø 106 mm
  - 🖪 Ø 150 mm
- **I** W×D 160×200 mm, see larger picture
- Net weight , B approx. 2,4 kg approx.
  2,8 kg
- Overall dimensions W×D×H 180×310×85 mm
- Permissible ambient temperature 10 °C/40 °C

- Protective working cover, scope of delivery:
   5 items, KERN 572-A02S05, € 40,-
- Rechargeable battery pack external, operating time up to 30 h without backlight, charging time approx. 10 h, KERN KS-A01, € 160,-
- Loop and hook for underfloor weighing, for models with [d] ≥ {0,01 g, KERN 572-A03, € 25,-
- Large glass draught shield with 3 sliding doors for easy access to the items being weighed. Weighing space W×D×H
   150×140×130 mm, for models with weighing plate size ■, KERN 572-A05, € 230,-

STANDARD						OPTION	
CAL EXT	PCS RECIPE	%     PERCENT	MOVE	MULTI	1 DAY		DAkks     ACCU     +3 DAYS

Model	Weighing	Readability	Reproducibility	Linearity	Resolution	Weighing plate	Price	Option	
	capacity						excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]					ex works	DAkkS	
KERN	g	g	g	g	Points		€	KERN	€
572-30	240	0,001	0,001	± 0,003	240.000	А	560,-	963-127	82,-
572-31	300	0,001	0,002	± 0,005	300.000	А	580,-	963-127	82,-
572-32	420	0,001	0,002	± 0,005	420.000	А	630,-	963-127	82,-
573-34	650	0,01	0,01	± 0,03	65.000	В	580,-	963-127	82,-
572-33	1600	0,01	0,01	± 0,03	160.000	В	550,-	963-127	82,-
572-35	2400	0,01	0,01	± 0,03	240.000	В	570,-	963-127	82,-
572-37	3000	0,01	0,02	± 0,05	300.000	В	580,-	963-127	82,-
572-39	4200	0,01	0,02	± 0,05	420.000	В	630,-	963-127	82,-
572-45	12000	0,05	0,05	± 0,15	240.000	С	570,-	963-128	99,-
572-55	20000	0,05	0,1	± 0,25	400.000	C	610,-	963-128	99,-
573-46	6500	0,1	0,1	± 0,3	65.000	С	580,-	963-128	99,-
572-43	10000	0,1	0,1	± 0,3	100.000	C	550,-	963-128	99,-
572-49	16000	0,1	0,1	± 0,3	160.000	С	560,-	963-128	99,-
572-57	24000	0,1	0,1	± 0,3	240.000	С	570,-	963-128	99,-



#### High-quality precision scale with comfortable graphic display and enormous weighing range

#### Features

03

- · Rapid and efficient operation thanks to the graphics display
- 1 Convenient recipe-weighing: with the recipe database, in which up to 99 recipes can be stored, each with up to 20 recipe ingredients with name and target value
- · Simple, clear user interface on the display in the following languages: German, English, French, Italian, Spanish, Portuguese
- Image: Image: Image: Kerner PLJ 2000-3A: High-quality milligram balance with enormous weighing range up to 2100 g - ideal for large samples or heavy tare containers
- · KERN PLJ: Automatic internal adjustment, guarantees high degree of accuracy and makes the balance independent of its location of use. Ideal for mobile applications which require verification, such as ambulatory gold and jewellery purchasing
- · Dosage aid: high stability mode and other filter settings can be selected
- · Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display
- · Draught shield standard for models with weighing plate size A, weighing space Ø×H 150×60 mm
- · Protective working cover included with delivery OPTION FACTORY

A	C
Technical data	







- Backlit LCD display, digit height 15 mm
- · Dimensions weighing surface, stainless steel A Ø 110 mm
- Ø 160 mm, see larger picture
- W×D 200×175 mm
- Permissible ambient temperature KERN PLS, PLJ: 5 °C/35 °C,35 °C KERN PLJ-M: 15 °C/30 °C

#### Accessories

- · Protective working cover, scope of delivery: 5 items, KERN PLJ-A01S05, € 40,-
- I Hook for underfloor weighing, KERN PLJ-A02, € 30,-
- · Set for density determination of liquids and solids with density > 1 for models with [d] = 0,001 g, KERN ALT-A02, € 830,-
- · Minimum weight of sample, smallest weight to be weighed, depending on the required process accuracy, only in combination with a DAkkS calibration certificate, KERN 969-103, € 10,-
- Equipment qualification: compliant qualification concept which includes the following validation services: Installation Qualification (IQ), Operating Qualification (OQ), Further details see 208

STANDARD						OPTION	FACTORY				
CAL INT CAL EXT RS 23 PLJ PLS				R MULTI DMS	FORCE 1 DAY		AkkS 3 DAYS PLJ-M				
Model	Weighing	Readability	Verification	Minimal load	Linearity	Weighing	Price		(	Option	
	capacity		value		-	plate	excl. of VAT	Verifica	tion	DAkkS Calibr. C	ertificate
	[Max]	[d]	[e]	[Min]			ex works	MID		DAkkS	
KERN	g	g	g	g	g		€	KERN	€	KERN	€
PLS 420-3F	420	0,001	-	-	± 0,004	A	680,-	-	-	963-127	82,-
PLS 720-3A	720	0,001	-	-	± 0,002	A	960,-	-	-	963-103	136,-
PLS 1200-3A	1200	0,001	-	-	± 0,003	Α	1010,-	-	-	963-103	136,-
PLS 4200-2F	4200	0,01	-	-	± 0,04	В	670,-	-	-	963-127	82,-
PLS 6200-2A	6200	0,01	-	-	± 0,03	В	970,-	-	-	963-104	155,-
PLS 8000-2A	8200	0,01	-	-	± 0,04	В	1180,-	-	-	963-104	155,-
PLS 20000-1F	20000	0,1	-	-	± 0,4	C	660,-	-	-	963-128	99,-
PLJ 420-3F	420	0,001	-	-	± 0,003	A	790,-	-	-	963-127	82,-
PLJ 720-3A	720	0,001	-	-	± 0,002	A	1100,-	-	-	963-103	136,-
PLJ 1200-3A	1200	0,001	-	-	± 0,003	A	1160,-	-	-	963-103	136,-
PLJ 2000-3A	2100	0,001	-	-	± 0,004	A	1690,-	-	-	963-103	136,-
PLJ 4200-2F	4200	0,01	-	-	± 0,04	В	790,-	-	-	963-127	82,-
PLJ 6200-2A	6200	0,01	-	-	± 0,03	В	1100,-	-	-	963-104	155,-
Note	: For applicatio	ons that require	e verification, p	lease order ve	rificati on at th	e same time,	initial verificat	ion at a later	date is r	not possible.	
		Verifi	cation at the fa	ctory, we need	I to know the fu	ull address of	the location of	fuse.			
PLJ 720-3AM	720	0,001	0,01	0,02	± 0,002	A	1150,-	965-216	70,-	963-103	136,-
PLJ 6200-2AM	6200	0,01	0,1	0,5	± 0,03	В	1150,-	965-217	82,-	963-104	155,-



# The new standard in the laboratory with robust tuning fork weighing system

#### Features

- KERN PNJ: Automatic internal adjustment, guarantees high degree of accuracy and makes the balance independent of its location of use. Ideal for mobile applications which require verification, such as ambulatory gold and jewellery purchasing
- KERN PNS: Adjusting program CAL for quick setting of the balance accuracy using an external test weight
- High-quality tuning fork measuring system for steady weight values and continuous weighing
- Capacity display: A bargraph display lights up to show how much of the weighing range is still available
- Precise counting: The automatic reference weight optimisation of reference weight gradually improves the average piece weight value
- · Compact size, practical for small spaces

- Large, shock proof weighing plate made of Stainless Steel
- Large glass draught shield with 3 sliding doors for easy access to the items being weighed. Weighing space W×D×H 172×171×160 mm, for models with weighing plate size III
- · Protective working cover included with delivery

#### **Technical data**

- Large LCD display, digit height 16,5 mm
- Dimensions weighing surface, Stainless Steel
   Ø 140 mm
- W×D 190×190 mm, see larger picture
- Overall dimensions W×D×H
- A 196×293×266 mm
- 196×293×89 mm
- Net weight
- A approx. 2,2 kg
- B approx. 2,8 kg
- Permissible ambient temperature 5 °C/40 °C

#### Accessories

Protective working cover, scope of delivery:
 5 items, KERN PNJ-A01S05, € 40,-

03

- RS-232/Bluetooth adapter to connect to Bluetooth capable devices, such as Bluetooth printers, tablets, laptops, smartphones, etc., KERN YKI-02, € 310,-
- RS-232/WiFi adapter for wireless connection to networks and WiFi capable devices, such as tablets, laptops or smartphones, KERN YKI-03, € 740,-
- RS-232/Ethernet adapter for connection to an IP-based Ethernet network,
- KERN YKI-01, **€ 310,-**
- ■ Gemstones plate, aluminium with practical spout, W×D×H 123×72×15 mm, KERN AEJ-A05, € 40,-
- Minimum weight of sample, smallest weight to be weighed, depending on the required process accuracy, only in combination with a DAkkS calibration certificate, KERN 969-103, € 10,-
- Equipment qualification: compliant qualification concept which includes the following validation services: Installation Qualification (IQ), Operating Qualification (OQ), Further details see 208
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDAR	0										OPTION		FACTORY
CAL INT	CAL EXT	RS 232	GLP	PCS			-√+ ⊙ TOL		((( <b>U</b> ))) T-FORK	1 DAY	ET	DAkkS +3 DAYS	H +3 DAYS
PNI	PNS	NJ LJL	PNI	105	TERCERT	UNIT	102	MOLT	1-1 OKK	TOAT		TO DAID	PNI

Model	Weighing	Readability	Verification	Minimal load	Linearity	Weighing	Price		(	Option		
	capacity		value			plate	excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	rtificate	
	[Max]	[d]	[e]	[Min]			ex works	MID		DAkkS		
KERN	g	g	g	g	g		€	KERN	€	KERN	€	
PNS 600-3	620	0,001	-	-	± 0,004	A	680,-	-	-	963-103	136,-	
PNS 3000-2	3200	0,01	-	-	± 0,02	В	620,-	-	-	963-127	82,-	
PNS 12000-1	12000	0,1	-	-	± 0,2	В	620,-	-	-	DAkkS Calibr. Certific:           DAkkS         Certific:           €         DAkkS         €           -         963-103         136           -         963-127         82		
Note: F	or application	s that require	verification, pl	ease order ver	ificati on at th	e same time, i	initial verificat	ion at a later	date is r	not possible.		

		Verifica	tion at the fac	tory, we need	to know the fu	Ill address of t	the location o	f use.			
PNJ 600-3M	620	0,001	0,01	0,02	± 0,004	A	810,-	965-216	70,-	963-103	136,-
PNJ 3000-2M	3200	0,01	0,1	0,5	± 0,02	В	770,-	965-216	70,-	963-127	82,-
PNJ 12000-1M	12000	0,1	1	5	± 0,2	В	770,-	965-217	82,-	963-128	99,-



#### The classic balance with robust tuning fork measuring system

#### Features

03

- II KERN EG-N: Internal adjustment in the case of a change in temperature and time-controlled at defined intervals, guarantees high degree of accuracy and makes the balance independent of its location of use
- KERN EW-N: Adjusting program CAL for quick setting of the balance accuracy using an external test weight
- · Stable temperature behaviour
- · Short stabilisation time
- Shock proof construction
- · High corner load performance
- GLP/ISO record keeping of weight values
- Totalising of pieces when counting

- · Draught shield standard for models with weighing plate size **I**, weighing space W×D×H 158×130×78 mm
- · Protective working cover included with delivery

#### **Technical data**

- Large LCD display, digit height 17 mm
- · Dimensions weighing surface, Stainless Steel ■ Ø 118 mm, see larger picture ■ W×D 170×140 mm, ■ W×D 180×160 mm
- Overall dimensions W×D×H, without draught shield **I**, **I** 182×235×75 mm, 192×275×87 mm
- Net weight approx. 1,4 kg
- Permissible ambient temperature 10 °C/30 °C









#### Accessories

- · Protective working cover, scope of delivery: 5 items, for models with weighing plate size ▲, B KERN EG-A05S05, € 40,-I KERN EG-A09S05, € 40,-
- Internal rechargeable battery pack, operating time up to 32 h without backlight, charging time approx. 12 h, for models with weighing plate size

▲, B KERN EG-A04, € 115,-

IN KERN EG-A06, € 115,-Note: If the rechargable battery pack is

retrofitted to a verified balance, it must be recalibrated

- 2 Large glass draught shield with 3 sliding doors for easy access to the items being weighed. Weighing space W×D×H 158×130×78 mm, for models with weighing plate size ▲, KERN EG-A03, € 250,-
- · Loop for underfloor weighing, for models with weighing plate size
- A, B KERN EG-A07, € 40,-
- I KERN EG-A08, € 40,-
- · Minimum weight of sample, Further details see 207, KERN 969-103, € 10,-
- Equipment qualification, Further details see 208 · Further details, plenty of further accessories and suitable printers see Accessories

STANDAR	D							 			OPTION				FACTORY
CAL INT	CAL EXT	RS 232	GLP PRINTER	PCS	% Percent	<b>C</b> UNIT	-√+ ⊙ TOL	230 V	((( <b>U</b> ))) T-FORK	1 DAY	ET	ACCU	B H	DAkkS +3 DAYS	+3 DAYS EG-N

Model	Weighing	Readability	Verification	Minimal load	Linearity	Weighing	Price		(	Option	
	capacity		value			plate	excl. of VAT	Verificat	tion	DAkkS Calibr. Ce	ertificate
	[Max]	[d]	[e]	[Min]			ex works	M		DAkkS	
KERN	g	g	g	g	g		€	KERN	€	KERN	€
EW 220-3NM	220	0,001	-	-	± 0,002	A	700,-	-	-	963-127	82,-
EW 420-3NM	420	0,001	-	-	± 0,003	A	770,-	-	-	963-127	82,-
EW 620-3NM	620	0,001	-	-	± 0,003	A	860,-	-	-	963-103	136,-
EW 820-2NM	820	0,01	-	-	± 0,01	В	610,-	-	-	963-127	82,-
EW 2200-2NM	2200	0,01	-	-	± 0,01	С	740,-	-	-	963-127	82,-
EW 4200-2NM	4200	0,01	-	-	± 0,02	С	830,-	-	-	963-127	82,-
EW 6200-2NM	6200	0,01	-	-	± 0,03	С	890,-	-	-	963-104	155,-
EW 12000-1NM	12000	0,1	-	-	± 0,2	С	710,-	-	-	963-128	99,-
Note: For a	oplications th	at require ver	ification, plea	ase order verif	icati on at the	e same time,	initial verifica	tion at a later	date is i	not possible.	
		Verificatio	n at the facto	ory, we need to	o know the fu	Ill address of	the location of	of use.			
EG 220-3NM	220	0,001	0,01	0,02	± 0,002	A	850,-	965-216 🕕	70,-	963-127	82,-
EG 420-3NM	420	0,001	0,01	0,02	± 0,003	A	920,-	965-216 🕕	70,-	963-127	82,-
EG 620-3NM	620	0,001	0,01	0,1	± 0,004	А	1030,-	965-201 🔳	120,-	963-103	136,-
EG 2200-2NM	2200	0,01	0,1	0,5	± 0,01	С	890,-	965-216 🕕	70,-	963-127	82,-
EG 4200-2NM	4200	0,01	0,1	0,5	± 0,02	C	970,-	965-216 🕕	70,-	963-127	82,-



Multifunctional laboratory balance with single-cell weighing system, also with EC type approval [M]

#### Features

- KERN PBJ: Internal adjustment in the case of a change in temperature and time-controlled at defined intervals, guarantees high degree of accuracy and makes the balance independent of its location of use
- KERN PBS: Adjusting program CAL for quick setting of the balance accuracy using an external test weight
- Metal housing: robust and sturdy
- Dosage aid
- Weighing with tolerance range (checkweighing): a visual signal helps with portioning, dispensing or grading
- Totalising of weights
- Identification number: 4 digits, printed on calibration protocol freely programmable
- Automatic data output to the PC/printer each time the balance is steady

- Draught shield standard for models with [d] = 0,001 g, weighing space W×D×H 180×193×87 mm
- · Protective working cover included with delivery

#### Technical data

- Large backlit LCD display, digit height 14 mm
- Dimensions weighing surface, Stainless Steel
   W×D 108×105 mm
   W×D 170×180 mm, see larger picture
- Overall dimensions W×D×H 209×322×78 mm (without draught shield)
- Net weight approx. 3,2 kg
- Permissible ambient temperature 10 °C/30 °C





03



#### Accessories

- Protective working cover, scope of delivery:
   5 items, for models with weighing plate size
   ▲ KERN PBS-A01S05, € 40, KERN PBS-A02S05, € 40,-
- B KERN PBS-A02S05, € 40,-
- Iset for density determination of liquids and solids with density ≥ 1, for models with weighing plate size
   KERN PBS-A04, € 1720,-
- KERN PBS-A03, € 1720,-
- RS-232/Ethernet adapter for connection to an IP-based Ethernet network, KERN YKI-01, € **310.**-
- Minimum weight of sample, smallest weight to be weighed, depending on the required process accuracy, only in combination with a DAkkS calibration certificate,
- KERN 969-103, **€ 10,-**
- Equipment qualification: compliant qualification concept which includes the following validation services: Installation Qualification (IQ), Operating Qualification (OQ), Further details see 208
- Further details, plenty of further accessories and suitable printers see Accessories

Single-cell advanced technology:

- Fully automatic manufactured weighing cell from one piece of material
- Stable temperature behaviour
- Short stabilisation time: steady weight values within approx. 3 s under laboratory conditions
- Shock proof construction

FACTORY

High corner load performance

STANDARD							OPTION
	GLP						DAkkS
CAL INT CAL EXT RS 232 PBJ PBS	INTERN PCS	RECIPE PERCENT L	JNIT TOL	MOVE	MULTI SC TECH	1 DAY	+3 DAYS

Model	Weighing	Readability	Verification	Minimal load	Linearity	Weighing	Price		C	Option	
	capacity		value			plate	excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	ertificate
	[Max]	[d]	[e]	[Min]			ex works	M		DAkkS	
KERN	g	g	g	g	g		€	KERN	€	KERN	€
PBS 620-3M	620	0,001	-	-	± 0,002	A	1470,-	-	-	963-103	136,-
PBS 4200-2M	4200	0,01	-	-	± 0,02	В	1240,-	-	-	963-127	82,-
PBS 6200-2M	6200	0,01	-	-	± 0,02	В	1490,-	-	-	963-104	155,-

Note: For applications that require verification, please order verificati on at the same time, initial verification at a later date is not possible. Verification at the factory, we need to know the full address of the location of use.

		1011100	tion at the fac	, we need			the location .	01 000.			
PBJ 620-3M	620	0,001	0,01	0,1	± 0,002	A	1720,-	965-201 🕕	120,-	963-103	136,-
PBJ 4200-2M	4200	0,01	0,1	0,5	± 0,02	В	1540,-	965-216 🔳	70,-	963-127	82,-
PBJ 6200-2M	6200	0,01	0,1	1	± 0,02	В	1850,-	965-202 🕕	120,-	963-104	155,-
PBJ 8200-1M	8200	0,1	1	5	± 0,2	В	1520,-	965-217 🔳	82,-	963-128	99,-



Robust laboratory and industrial precision scale for heavy items, also with EC type approval [M]

#### Features

STANDARD

- KERN PEJ: Automatic internal adjustment, guarantees high degree of accuracy and makes the balance independent of its location of use
- KERN PES: Adjusting program CAL for quick setting of the balance accuracy using an external test weight
- Metal housing: robust and sturdy
- Weighing with tolerance range (checkweighing): Input of two upper and two lower limit values through four arrow keys. An audible and visual signal assists with the portioing, dispensing or grading
- Draught shield standard for models with [d] = 0,001 g, weighing space W×D×H 170×150×100 mm

- · Underfloor weighing: load support with hook on the underside of the balance, standard for models with [d] = 0,001 g, hook not included with the delivery
- A, B Protective working cover included with delivery

#### **Technical data**

- · Fluorescent display, bright with high contrast, digit height 14 mm
- · Dimensions weighing surface, Stainless Steel A W×D 140×120 mm W×D 200×200 mm, see larger picture
- W×D 250×220
- Overall dimensions W×D×H, without draught shield

OPTION

- A 220×330×90 mm
- 220×339×80 mm
- 260×330×113 mm







- Net weight approx. A 4,0 kg, B 4,4 kg, C 10 kg
- Permissible ambient temperature 10 °C/30 °C

#### Accessories

- Protective working cover, scope of delivery: 5 items, KERN PES-A04S05, € 40,-
- KERN PES: Internal rechargeable battery pack, operating time up to 32 h, without backlight, charging time approx. 15 h, KERN PES-A01, € 640,-
- Loop for underfloor weighing, for models with weighing plate size **B**, KERN PES-A03, € 40,-
- Relay output to connect relays, signal lamps, valves etc., 5 outputs for weighing in 3 tolerance ranges, must be ordered at purchase, KERN PES-A02, € 510,-
- RS-232/Ethernet adapter for connection to an IP-based Ethernet network, KERN YKI-01, € 310,-
- Minimum weight of sample, smallest weight to be weighed, depending on the required process accuracy, only in combination with a DAkkS calibration certificate, KERN 969-103, € 10,-
- · Equipment qualification: compliant qualification concept which includes the following validation services: Installation Qualification (IQ), Operating Qualification (OQ), Further details see 208
- · Further details, plenty of further accessories and suitable printers see Accessories

FACTORY

CAL INT CAL EXT RS 232	PRINTER PCS	RECIPE PERCENT	UNIT TOL	UNDER 230 V	((( ) )) T-FORK 1 DAY		MULTI +3 DAYS	SWITCH ACC			
PEJ PES 2x				AB				PES	PEJ	-	
Model	Weighing	Readability	Verification	Minimal load	Linearity	Weighing	Price		C	Option	
	capacity		value			plate	excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	rtificate
	[Max]	[d]	[ [e]	[Min]			ex works	M		DAkkS	
KERN	g	g	g	g	g		€	KERN	€	KERN	€
PES 620-3M	620	0,001	-	-	± 0,003	A	1290,-	-	-	963-103	136,-
PES 2200-2M	2200	0,01	-	-	± 0,02	В	920,-	-	-	963-127	82,-
PES 4200-2M	4200	0,01	-	-	± 0,02	В	1090,-	-	-	963-127	82,-
PES 6200-2M	6200	0,01	-	-	± 0,03	В	1340,-	-	-	963-104	155,-
PES 15000-1M	15000	0,1	-	-	± 0,2	В	1270,-	-	-	963-128	99,-

PES 31000-1M 2250,-31000 0.1 ± 0.4 С 963-128 Note: For applications that require verification, please order verificati on at the same time, initial verification at a later date is not possible.

		vennca	ition at the rac	cory, we need	to know the r	un address of	the location (	Ji use.			
PEJ 620-3M	620	0,001	0,01	0,1	± 0,003	А	1530,-	965-201 🔳	120,-	963-103	136,-
PEJ 2200-2M	2200	0,01	0,1	0,5	± 0,02	В	1150,-	965-216 🔳	70,-	963-127	82,-
PEJ 4200-2M	4200	0,01	0,1	0,5	± 0,02	В	1320,-	965-216 🔳	70,-	963-127	82,-
I ONLY WHILE STOC	KS LAST!										

99,-



### KERN ADB 200-4 Page 34

- > Now with higher weighing range 220 g!
- > External adjustment
- > Large glass draught shield with 3 sliding doors
- > Large weighing capacity at a top price

### only € 740,-

### **Analytical balances**

### **Quick-Finder Analytical balances**

Readability [d]	Weighing capacity [Max]	Model	Price excl. of VAT ex works	Page	DAYS	М	CAL INT	CAL EXT	• ACCA • RS 232	GLP INTERN	GLP PRINTER	RECIPE
iaj mg	[IVIAX] g	KERN	ex works €			For an	evolana	ation on t	he nictos	see fro	nt flan	
-	-			0.0			•			-	пспар	
0,01	101	ABT 100-5NM	2040,-	39	1	0	•		•	•		•
0,01	135	ABP 100-5M	3530,-	41		0	•					•
0,01	210	ALJ 210-5A	3310,-	36	1		•					•
0,01	220	ABP 200-5M	4990,-	41	1	0						•
0,01   0,1	42   120	ABT 120-5DNM	2140,-	39	1	0	•		•	•		•
0,01   0,1	52   120	ABP 100-5DM	2690,-	40	1	0	•			•		•
0,01   0,1	82   220	ALJ 200-5DA	1950,-	35	1		•		•		•	•
0,01   0,1	82   220	ABT 220-5DNM	2210,-	39	1	0	•		•	•		•
0,01   0,1	102   220	ABP 200-5DM	2890,-	40	1	0	•		•	•		•
0,1	82	ABS 80-4N	990,-	37	1		-	•	0		•	•
0,1	82	ABJ 80-4NM	1100,-	37	1		•		0		•	•
0,1	82	ACS 80-4	1050,-	37	1			•	•		•	•
0,1	82	ACJ 80-4M	1160,-	37	1	0	•		•			
0,1	120	ADB 600-C3 🗇	660,-	34	1			•	•		•	
0,1	120	ADB 100-4	670,-	34	1			•	•		•	
0,1	120	ADJ 600-C3 🗇	800,-	34	1		•		•		•	
0,1	120	ADJ 100-4	810,-	34	1		•		•		•	
0,1	120	ABS 120-4N	1090,-	37	1			•	0		•	•
0,1	120	ABJ 120-4NM	1150,-	37	1		•		0		•	•
0,1	120	ACS 100-4	1130,-	37	1			•	•		•	
0,1	120	ACJ 100-4M	1180,-	37	1	0	•		•		•	•
0,1	120	ABT 120-4NM	1560,-	39	1	0	•		•	•		•
0,1	120	ABP 100-4M	1890,-	40	1	0	•		•	•		•
0,1	160	ALS 160-4A	1100,-	35	1			•	•		•	•
0,1	160	ALJ 160-4A	1150,-	35	1		•		•		•	•
0,1	160	ALJ 160-4AM	1190,-	35	1	0	•		•		•	•
0,1	210	ADJ 200-4	910,-	34	1		•		•		•	
0,1	220	ADB 200-4	740,-	34	1				•		•	
0.1	220	ABS 220-4N	1150,-	37	1			•	0		•	•
0,1	220	ABJ 220-4NM	1250,-	37	1		•		0		•	•
0.1	220	ACS 200-4	1190,-	37	1			•	•		•	
0,1	220	ACJ 200-4M	1280,-	37	1	0	•		•		•	•
0,1	220	ABT 220-4NM	1890,-	39	1	0	•		•	•		
0,1	220	ABP 200-4M	2250,-	40	1	0	•					
0,1	250	ALS 250-4A	1160,-	35	1	-		•			•	
0,1	250	ALJ 250-4A	1210,-	35	1		•		•			
0,1	250	ALJ 250-4AM	1250,-	35	1	0						
0,1	310	ALJ 310-4A	1250,-	35	1						•	
0,1	320	ABS 320-4N	1290,-	37	1		-	•	0			
0,1	320	ABJ 320-4NM	1420,-	37	1		•		0		•	
0,1	320	ACS 300-4	1350,-	37	1		-	•	•		•	
0,1	320	ACJ 300-4	1470,-	37	1	0	•	-				
0,1	320	ABT 320-4NM		37	1	0				-		
0,1	320	ABP 300-4M	2100,- 2490,-	40	1	0						
,			/	40 35	1	0		•		-	-	
0,1	510	ALJ 500-4A	2050,-	30			-	•			-	-















The price leader in analytical balances with internal or external calibration – now as version with [Max] 220 g!

#### Features

04

- New model with incredibly high resolution. Ideal if extremely precise weighing is required
- KERN ADJ: Automatic internal adjustment in the case of a change in temperature ≥ 2 °C or timecontrolled every 3 h, guarantees high degree of accuracy and makes the balance independent of its location of use
- KERN ADB: Adjusting program CAL for quick setting of the balance accuracy using an external test weight
- ADB 600-C3: Compact, space-saving carat balance with a readout of 0.001 ct and a weighing range of 600 ct. The high level of accuracy saves hard cash wherever you are weighing valuable precious stones
- Level indicator and levelling feet for precise levelling of the scale, fitted as standard, to give the most accurate weighing result
- Large glass draught shield with 3 sliding doors for easy access to the items being weighed
- Compact size, practical for small spaces
- Simple and convenient 6-key operation standard

.....

Analytical balances

CAL INT CAL EXT RS 232

#### Technical data

- Large backlit LCD display, digit height 16 mm
- Dimensions weighing surface, stainless steel, Ø 90 mm
- Overall dimensions (incl. draught shield) W×D×H KERN ADB/ADJ: 230×310×330 mm KERN ADB-C/ADJ-C: 230×310×210 mm
- Weighing space W×D×H KERN ADB/ADJ: 170×160×205 mm KERN ADB-C/ADJ-C: 170×160×110 mm
- Permissible ambient temperature 10 °C/30 °C

#### Accessories

- Set for density determination of liquids and solids with density ≤/≥ 1, the density is indicated directly on the display, KERN YDB-03, € 390,-
- Inniser to neutralise electrostatic charge, KERN YBI-01A, € 890,-
- Gemstones plate, aluminium with practical spout, W×D×H 83×66×23 mm, KERN AEJ-A05, € 40,-
- **I** Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, € **890,**-
- Minimum weight of sample, smallest weight to be weighed, depending on the required process accuracy, only in combination with a DAkkS calibration certificate, KERN 969-103, € 10,-
- Equipment qualification: compliant qualification concept which includes the following validation services: Installation Qualification (IQ), Operating Qualification (OQ), Further details see 208
- Further details, plenty of further accessories and suitable printers see *Accessories*

Model	Weighing capacity	Readability	Reproducibility	Linearity	Net weight	Price	Option		
	ineloimile eapaeity	lioudusmity	rioproducionity	Linoanty	inor molant		DAkkS Calibr. Ce		
	[Max]	[d]			approx.	ex works	DAkkS		
KERN	g	mg	mg	mg	kg	€	KERN	€	
ADB 100-4			0,2	± 0,4	4,4	670,-	963-101	160,-	
ADB 200-4			0,2	± 0,4	4,4	740,-	963-101	160,-	
ADB 600-C3 🏶	600 ct 0,001 ct		0,002 ct ± 0,004 ct		3,8	660,-	963-101	160,-	
ADJ 100-4	120	0,1	0,2	± 0,4	5	810,-	963-101	160,-	
ADJ 200-4	210	0,1	0,2	± 0,4	5	910,-	963-101	160,-	
ADJ 600-C3 🖤	600 ct	0,001 ct	0,002 ct	± 0,004 ct	4,5	800,-	963-101	160,-	

New model

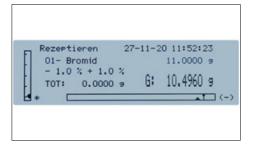
34

= Carat balances

Analytical balances KERN ALS-A · ALJ-A



Analytical balance with high weighing capacity, graphic display and convenient recipe function – now also available as single-range semi-microbalance with incredibly high resolution



Convenient recipe-weighing: with the recipe database, in which up to 99 recipes can be stored, each with up to 20 recipe ingredients with name and target value



Clear printout with date and time. In addition, the components of the mixture are numbered automatically and printed out with the name and weight



• GLP/ISO record keeping professional, detailed GLP Protocol, so that the balance is completely compliant with the relevant standard requirements in accordance with ISO, GLP and GMP

#### Analytical balances KERN ALS-A · ALJ-A



#### 04

#### Features

- NEW: KERN ALJ 210-5A ! Semi-micro model with only one weighing range and incredibly high resolution. Ideal when weighing heavy loads over the entire weighing range with the finest readability. Particularly advantageous: an ioniser for neutralising electrostatic charge is already fitted as standard
- Rapid and efficient operation thanks to the graphics display. Simple, clear user interface on the display in the following languages: DE, EN, FR, IT, ES, PT
- KERN ALJ-A03: lonizer to neutralise electrostatic charge for fixed installation in the analytical balance. Particularly convenient handling as you no longer need a separate device. Simply enable the ionizer fan at the push of a button. Suitable for all models, see *Accessories* on the right. Already fitted as standard in the KERN ALJ 210-5A model Adjusting program CAL for quick setting of the balance accuracy using an external *test weight*
- Short stabilisation time: steady weight values within approx. 4 s (models with [d] = 0,1 mg), 6 | 10 s (models with [d] = 0,01 | 0,1 mg) under laboratory conditions
- Weighing with tolerance range (checkweighing): Input of an upper/lower limit value. A visual signal assists with portioning, dispensing or grading
- Dosage aid: high stability mode and other filter settings can be selected



- Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through Display.
- Ergonomically optimised keypad for left and righthanded users
- Large glass draught shield with 3 sliding doors for easy access to the items being weighed.
- Compact size, practical for small spaces
- Protective working cover included with delivery

#### Technical data

- Backlit LCD display, digit height 15 mm
- Dimensions weighing surface, stainless steel, Ø 80 mm
- Overall dimensions (incl. draught shield)
   W×D×H 210×340×330 mm
- Weighing space W×D×H 160×140×205 mm
- Net weight 7 kg
- Permissible ambient temperature 5 °C/35 °C



#### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN ALJ-A01S05, € 40,-
- Protective dust cover, KERN ABS-A08, € 30,-
- Draft shield rear panel with integrated ionizer to neutralise electrostatic charge. Is fitted in place of the existing glass rear panel of the draft shield. Suitable for all models in the range, please order at the time you order your balance (not necessary with model ALJ 210-5A, as it is already installed as standard), the scope of delivery is the rear panel, ionizer, Universal plug-in power supply. Factory Option, KERN ALJ-A03, € 620,-
- ■ Set for density determination of liquids and solids with density ≤/≥ 1, the density is indicated directly on the display, KERN YDB-03, € **390,-**
- ■ Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, € 890,-
- Minimum weight of sample, smallest weight to be weighed, depending on the required process accuracy, only in combination with a DAkkS calibration certificate, KERN 969-103, € 10,-
- Equipment qualification: compliant qualification concept which includes the following validation services: Installation Qualification (IQ), Operating Qualification (OQ), Further details see 208
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD										OPTION	FACTORY						
				GLP		Ь	%	$\mathcal{C}$		^-–	B	N <b>I</b> S		1	DAkkS	Μ	
	CAL INT	CAL EXT	RS 232	INTERN	PCS	RECIPE	PERCENT	UNIT	TOL	MOVE	MULTI	FORCE	1 DAY	ET	+3 DAYS	+3 DAYS	
	ALI-A	ALS-A														ALI-AM	

heght hebh							/ L) / III					
Model	Weighing	Readability	Verification	Minimal load	Reproduci-	Linearity	Price	Option				
	capacity		value		bility		excl. of VAT	Verification		DAkkS Calibr. Ce	ertificate	
	[Max]	[d]	[e]	[Min]			ex works	MD		DAkkS		
KERN	g	mg	mg	mg	mg	mg	€	KERN	€	KERN	€	
ALS 160-4A	160	0,1	-	-	0,1	± 0,3	1100,-	-	-	963-101	160,-	
ALS 250-4A	<b>250-4A</b> 250 0,1 0,1 ±0,3 <b>1160,-</b> 963-101 16										160,-	
Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible.												
	Verification at the factory, we need to know the full address of the location of use.											
ALJ 210-5A 🔤	210	0,01	-	-	0,05	± 0,1	3310,-	-	-	963-101	160,-	
ALJ 200-5DA	82   220	0,01   0,1	-	-	0,04   0,1	± 0,1   0,2	1950,-	-	-	963-101	160,-	
ALJ 160-4A	160	0,1	-	-	0,1	± 0,3	1150,-	-	-	963-101	160,-	
ALJ 160-4AM	160	0,1	1	10	0,2	± 0,3	1190,-	965-201	120,-	963-101	160,-	
ALJ 250-4A	250	0,1	-	-	0,1	± 0,3	1210,-	-	-	963-101	160,-	
ALJ 250-4AM	250	0,1	1	10	0,2	± 0,3	1250,-	965-201	120,-	963-101	160,-	
ALJ 310-4A	310	0,1	-	-	0,1	± 0,3	1250,-	-	-	963-101	160,-	
ALJ 500-4A	510	0,1	-	-	0,2	± 0,4	2050,-	-	-	963-101	160,-	

ALJ 500-4A

Analytical balance KERN ABS-N · ABJ-NM · ACS · ACJ





KERN ACS/ACJ with standard data interface RS-232 and USB

The bestseller in analytical balances, with high-quality single-cell weighing system, also with EC type approval [M]

### Features

- KERN ABJ-NM, ACJ: Automatic internal adjustment in the case of a change in temperature ≥ 2 °C or timecontrolled every 4 h, guarantees high degree of accuracy and makes the balance independent of its location of use
- KERN ABS-N, ACS: Adjusting program CAL for quick setting of the balance accuracy using an external test weight
- Dosage aid

- Simple recipe weighing and documenting with a combined tare/print function. In addition, the ingredients for the recipe are numbered automatically and printed out with their corresponding number and nominal weight
- Automatic data output to the PC/printer each time the balance is steady
- Identification number: 4 digits, printed on calibration protocol freely programmable
- Protective working cover included with delivery

### Analytical balance KERN ABS-N · ABJ-NM · ACS · ACJ



### **Technical data**

- Large LCD display, digit height 14 mm
- O4 Dimensions of weighing surface, stainless steel, Ø 91 mm
  - Overall dimensions (incl. draught shield)
     W×D×H 210×340×325 mm
  - Weighing space W×D×H 174×162×227 mm
  - Net weight 6 kg
  - Permissible ambient temperature 10 °C/30 °C



### Accessories

- Protective working cover, scope of delivery: 5 items, KERN ACS-A02S05, € 40,-
- Set for density determination of liquids and solids with density ≤/≥ 1, the density is indicated directly on the display, KERN YDB-03, € 390,-
- I loniser to neutralise electrostatic charge, KERN YBI-01A, € 890,-
- KERN ABS-N/ABJ-NM: Data interface RS-232, interface cable included, approx. 1,5 m
   KERN ACS-A01, € 100,-
- I Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, € 890,-
- Minimum weight of sample, smallest weight to be weighed, depending on the required process accuracy, only in combination with a DAkkS calibration certificate, KERN 969-103, € 10,-
- Equipment qualification: compliant qualification concept which includes the following validation services: Installation Qualification (IQ), Operating Qualification (OQ), Further details see 208
- Further details, plenty of further accessories and suitable printers see *Accessories*





Single-cell advanced technology:

- Fully automatic manufactured weighing cell from one piece of material
- Stable temperature behaviour
- Short stabilisation time: steady weight values within approx. 3 s under laboratory conditions
- $\boldsymbol{\cdot}$  Shock proof construction
- High corner load performance

STANDARD						OPTION	FACTORY				
	€ GLP	<u>.</u>	%				DAKKS M				
CAL INT CAL EXT RS 232	USB PRINTER	PCS RECIPE	PERCENT	TOL MULTI	SC TECH 1 DAY		+3 DAYS +3 DAYS				
ABJ-NM ABS-N ACS/ACJ A ACJ ACS	ACS/ACJ					ABS-N/ ABJ-NM	ACJ				
Model	Weighing	Readability	Verification	Minimal load	Reproduci-	Linearity	Price		(	Option	
	capacity		value		bility		excl. of VAT	Verifica	tion	DAkkS Calibr. Co	ertificate
	[Max]	[d]	[e]	[Min]			ex works	MD	€	DAkkS	€
KERN	g	mg	mg	mg	mg	mg	€	KERN	€	KERN	€
ABS 80-4N	82	0,1	-	-	0,2	± 0,3	990,-	-	-	963-101	160,-
ABS 120-4N	120	0,1	-	-	0,2	± 0,3	1090,-	-	-	963-101	160,-
ABS 220-4N	220	0,1	-	-	0,2	± 0,3	1150,-	-	-	963-101	160,-
ABS 320-4N	320	0,1	-	-	0,2	± 0,3	1290,-	-	-	963-101	160,-
ACS 80-4	82	0,1	-	-	0,2	± 0,3	1050,-	-	-	963-101	160,-
ACS 100-4	120	0,1	-	-	0,2	± 0,3	1130,-	-	-	963-101	160,-
ACS 200-4	220	0,1	-	-	0,2	± 0,3	1190,-	-	-	963-101	160,-
ACS 300-4	320	0,1	-	-	0,2	± 0,3	1350,-	-	-	963-101	160,-
					<u> </u>						
ABJ 80-4NM	82	0,1	-	-	0,2	± 0,3	1100,-	-	-	963-101	160,-
ABJ 120-4NM	120	0,1	-	-	0,2	± 0,3	1150,-	-	-	963-101	160,-
ABJ 220-4NM	220	0,1	-	-	0,2	± 0,3	1250,-	-	-	963-101	160,-
ABJ 320-4NM	320	0,1	-	-	0,2	± 0,3	1420,-	-	-	963-101	160,-
Note: F	or application						initial verificati		date is r	ot possible.	
			tion at the fac		1		the location of			1	
ACJ 80-4M	82	0,1	1	10	0,2	± 0,3	1160,-	965-201	120,-	963-101	160,-
ACJ 100-4M	120	0,1	1	10	0,2	± 0,3	1180,-	965-201	120,-	963-101	160,-
ACJ 200-4M	220	0,1	1	10	0,2	± 0,3	1280,-	965-201	120,-	963-101	160,-

0,2

± 0,3

1470,-

965-201

10

320

0,1

ACJ 300-4M

963-101

160,-

120,-









04

### The premium model with single-cell weighing system

### Features

- Automatic internal adjustment in the case of a change in temperature ≥ 0,5 °C or timecontrolled every 4 h, guarantees high degree of accuracy and makes the balance independent of its location of use
- Dosage aid: High-stability mode and other filter settings can be selected
- Simple recipe weighing and documenting with a combined tare/print function. In addition, the ingredients for the recipe are numbered automatically and printed out with their corresponding number and nominal weight
- Identification number: 4 digits, printed on calibration protocol freely programmable
- Printout of a GLP-compliant calibration report conveniently at the touch of a button
- Automatic data output to the PC/printer each time the balance is steady
- Large glass draught shield with 3 sliding doors for easy access to the items being weighed.
- Protective working cover included with delivery

### **Technical data**

- Large LCD display, digit height 14 mm
- Dimensions weighing surface, stainless steel,
   Ø 80 mm
- Overall dimensions (incl. draught shield)
   W×D×H 217×356×338 mm
- Weighing space W×D×H 168×172×223 mm
- Net weight approx. 7 kg
- Permissible ambient temperature 10  $^\circ\text{C}/30$   $^\circ\text{C}$

### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN ABT-A02S05, € 40,-
- II Set for density determination of liquids and solids with density ≤/≥ 1, the density is indicated directly on the display, KERN YDB-03, € 390,-
- I loniser to neutralise electrostatic charge, KERN YBI-01A, € 890,-

- I Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, € 890,-
- Minimum weight of sample, smallest weight to be weighed, depending on the required process accuracy, only in combination with a DAkkS calibration certificate, KERN 969-103, € 10,-
- Equipment qualification: compliant qualification concept which includes the following validation services: Installation Qualification (IQ), Operating Qualification (OQ), Further details see 208
- Further details, plenty of further accessories and suitable printers see *Accessories*

Single-cell advanced technology:

- Fully automatic manufactured weighing cell from one piece of material
- Stable temperature behaviour
   Short stabilization time: staady
- Short stabilisation time: steady weight values within approx. 4 s (models with [d] = 0,1 mg), approx. 10 s (models with [d] = 0,01 mg) under laboratory conditions
- Shock proof construction
- High corner load performance

STANDARD		OPTION FACTORY
CALINT RS 232 INTERN	PCS RECIPE PERCENT UN	DAkkS +3 DAYS +3 DAYS

Model	Weighing	Readability	Verification	Minimal	Reproduci-	Linearity	Price		(	Option						
	capacity		value	load	bility		excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	ertificate					
	[Max]	[d]	[e]	[Min]			ex works	MD		DAkkS						
KERN	g	mg	mg	mg	mg	mg	€	KERN	€	KERN	€					
ABT 100-5NM	101	0,01	1	1	0,05	± 0,15	2040,-	965-201	120,-	963-101	160,-					
ABT 120-4NM	120	0,1	1	10	0,1	± 0,2	1560,-	965-201	120,-	963-101	160,-					
ABT 220-4NM	220	0,1	1	10	0,1	± 0,2	1890,-	965-201	120,-	963-101	160,-					
ABT 320-4NM	320	0,1	1	10	0,1	± 0,3	2100,-	965-201	120,-	963-101	160,-					
	Dual	-range balance	e switches aut	omatically to	the next large	est weighing ca	pacity [Max] a	nd readibility	/ [d]							
ABT 120-5DNM	42   120	0,01   0,1	1	1	0,02   0,1	± 0,05   0,2	2140,-	965-201	120,-	963-101	160,-					
ABT 220-5DNM         82   220         0,01   0,1         1         1         0,05   0,1         ± 0,1   0,2         2210,-         965-201         120,-         963-101         160,-									160,-							
Note: F	Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible.															
		Verifica	tion at the fac	tory, we need	Verification at the factory, we need to know the full address of the location of use.											





**EXERN ABP 100-5DM** with optional ionizer

■ NEW: Extremely fast ionization process, thanks to the latest generation of KERN ionization technology to neutralise electrostatic charge for fixed installation in the analytical balance. Particularly convenient handling as you no longer need a separate device. Simply enable the ionizer fan at the push of a button. Suitable for all models

Premium analytical balance with the latest Single-Cell Generation for extremely rapid, stable weighing results – now also available as single-range semi-microbalance with incredibly high resolution

RI

KERN



Bright OLED display with large viewing angle for the very best readout from a wide range of lines of sight or poor lighting conditions



USB data interfaces and RS-232 for transferring weighing data to the PC, tablet, printer, USB as well as connecting external devices, such as barcode scanner (option), numeric keypad (option) etc.



GLP/ISO record keeping professional and detailed GLP protocol, so that the scale is fully compliant with the relevant standard requirements according to ISO, GLP and GMP

### Analytical balance KERN ABP



### Features

- This new generation of analytical balances combines the highest level of precision with large weighing ranges. Thanks to the new Single-Cell Generation, the weighing result is displayed in a fraction of the time with comparable models. Together with the intuitively structured menu, this means that you can work efficiently and rapidly
- Navigation pad for super quick navigating through the menus
- Automatic internal adjustment in the case of a change in temperature ≥ 1 °C or timecontrolled every 4 h, guarantees high degree of accuracy and makes the balance independent of its location of use
- The Minimum weight of sample can be manually stored in the device or automatically calculated. For weighings below this value, the balance issues a warning message
- Dosage aid: High-stability mode and other filter settings can be selected
- Simple recipe weighing and documenting with a combined tare/print function. In addition, the ingredients for the recipe are numbered automatically and printed out with their corresponding number and nominal weight
- Individual user settings can be stored for up to 10 users: user name/number (can be printed out or added to the record for each process), password, menu language, user profiles, accessing user settings via barcode, additional guest mode for users who are not logged in, authorizations, eg. B. balance adjustment, changing settings or conditioning or modification of a recipe only by the authorized person & performing the formulation by the user
- USB data interface, e.g. for connecting a USB keyboard for easy capture of item numbers, item texts, for easier navigation within the menu etc.



- U.S. FDA 21 Part 11: assists you in data integrity in accordance with U.S. FDA 21 Part 11 (for example weighing result, sample ID, user name, scales ID, ...)
- Menu languages DE, EN
- Automatic data output to the PC/printer each time the balance is steady
- Large glass draught shield with 3 sliding doors for easy access to the items being weighed.
- KERN ABP-DM: Multi-function weighing plate included with delivery, minimises the effect of currents of air in the weighing chamber and therefore significantly improves the stabilisation time and repeatability. In addition samples, sample paper, PCR containers, micro centrifuge tubes and many other items which protrude can be easily fixed in place and weighed easily
- Protective working cover included with delivery

### Technical data

- Luminescent OLED display, digit height 14 mm, bright with high contrast, for easy reading of the weight, even in poor lightingconditions
- Dimensions weighing surface  ${\it \varnothing}$  91 mm
- Overall dimensions (incl. draught shield)
   W×D×H, 213×433×344 mm
- Weighing space W×D×H 166×156×220 mm
- Net weight approx. 8 kg
- Permissible ambient temperature 10  $^{\circ}\text{C}/30$   $^{\circ}\text{C}$

### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN YBA-A06S05, € 40,-
- Set for density determination of liquids and solids with density ≤/≥ 1, the density is indicated directly on the display, KERN YDB-03, € 390,-



- USB barcode scanner, hand-held version, dimensions W×D×H 152×84×63 mm, KERN PET-A09, € 350,-
- Solution Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, € 890,-
- Minimum weight of sample, smallest weight to be weighed, depending on the required process accuracy, only in combination with a DAkkS calibration certificate, KERN 969-103, € 10,-
- Equipment qualification: compliant qualification concept which includes the following validation services, Installation Qualification (IQ), Operating Qualification (OQ), Further details see 208
- Further details, plenty of further accessories and suitable printers see *Accessories*

Single-cell advanced technology:

- Fully automatic manufactured weighing cell from one piece of material
- Stable temperature behaviour
- Short stabilisation time: steady weight values within

approx. 2 s (models with [d] = 0,1 mg), approx. 8 s (models with [d] = 0,01 mg, 0,01 | 0,1 mg) under laboratory conditions

- Shock proof construction
- High corner load performance

STANDARD												OPTION	FACTORY		
CAL INT	• #### • RS 232	USB	GLP INTERN	PCS		% PERCENT		-√+ ⊙ Э» TOL	MOVE	UNDER		SC TECH	1 DAY	DAkkS +3 DAYS	H +3 DAYS
		1x Host 1x Device													

Model	Weighing	Readability	Verification	Minimal load	Reproduci-	Linearity	Price		(	Option	
	capacity		value		bility		excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	rtificate
	[Max]	[d]	[e]	[Min]			ex works	MI		DAkkS	
KERN	g	mg	mg	mg	mg	mg	€	KERN	€	KERN	€
ABP 100-5M	135	0,01	1	1	0,05	± 0,2	3530,-	965-201	120,-	963-101	160,-
ABP 200-5M	220	0,01	1	1	0,05	± 0,2	4990,-	965-201	120,-	963-101	160,-
ABP 100-4M	120	0,1	1	10	0,1	± 0,2	1890,-	965-201	120,-	963-101	160,-
ABP 200-4M	220	0,1	1	10	0,1	± 0,2	2250,-	965-201	120,-	963-101	160,-
ABP 300-4M	320	0,1	1	10	0,2	± 0,3	2490,-	965-201	120,-	963-101	160,-
	Dual	-range balance	e switches au	tomatically to	the next large	est weighing ca	pacity [Max] a	nd readibility	/ [d]		
ABP 100-5DM	52   120	0,01   0,1	1	1	0,02   0,1	± 0,05   0,2	2690,-	965-201	120,-	963-101	160,-
ABP 200-5DM	102   220	0,01   0,1	1	1	0,05   0,1	± 0,1   0,2	2890,-	965-201	120,-	963-101	160,-
Note: F	or applications	s that require	verification, p	lease order ve	erification at th	ne same time, i	nitial verificat	ion at a later	date is n	ot possible.	
	Verification at the factory, we need to know the full address of the location of use.										

🔤 New model

# **Moisture analysers**

They have a number of memories, network connectivity, different heating modes and are easy to use due to the intuitive operation and easy-to-read displays. Our high-quality moisture analysers are ideal for use in the food processing industry, water resource management, plastics industry, the energy industry or agriculture.

# Halogen moisture analysers for rapid, reliable measuring results

Our models work on the thermogravimetric principle which means the sample is weighed and warmed with a halogen lamp. During this procedure, the weight loss is recorded continuously while it is drying until it reaches the defined value. The current moisture content for the sample can then be automatically calculated from the measured weight difference.

All benefits of our moisture analysers with halogen and infra-red drying:

- · Even heating of the sample without risk of burning
- Rapid amortisation through low purchase costs
- Temperature ranges from 35 to 200 degrees
- High level of measurement accuracy to 0.01 %
- Spare capacity, weighing range up to 200 g
- You can select between different heating profiles
- You can select between different switch-off criteria, automatic or time-controlled

### The drying programs

Depending on the model, our moisture analysers within the laboratory balance category have different heating profiles, so the procedure can be adapted to best suit the sample in question.

- The standard drying setting is suitable for most types of sample. As an option you can choose between these two types of switch-off criteria: Automatic drying (AUTO) or time-controlled (TIME).
- Rapid drying is suitable for samples with a high moisture content.
- Smooth heating through gentle drying prevents disintegration and formation of a skin
- As an alternative to rapid drying, you can also use stage drying as well. The temperature and the time period for the increase in temperature can be freely selected. Equally, the moisture can be determined selectively for different temperatures.

Our recommendation: The high-performance DBS moisture analyser with excellent stability, reliability and reaction speed, 10 drying programs can be stored and memory for 100 drying processes carried out as well as a USB and RS 232 data interface.

### Simple data transfer

For easy, convenient communication between the moisture analyser and printer, or PC there are interfaces available, for example to connect a USB or Ethernet. The devices themselves have several internal memories, where you can store drying programs with drying parameters, such as, for example, drying period, drying temperature, display settings, switch-off criteria etc. This saves time and guarantees repeatable results. Compatible printers to print out weights, calibration and interface kits are available in our extensive range of accessories, suitable for each moisture analyser.

For communication between the balance and the printer, the moisture analyser must be disconnected from the power supply and connected to the printer. We guarantee fault-free operation with the KERN interface cable. To transfer the values to the PC we recommend our "Balance Connection KERN SCD 4.0" transfer software. Programs such as Excel or other spreadsheet applications are ideal for displaying graphics.

Our recommendation: DLB moisture analyser with intuitive graphics display, multi-lingual user guidance, convenient Auto-Tare when closing the lid and RS 232 data interface

### **Our service options**

In order for the comparability of the results of moisture analyses to be guaranteed, the correct temperatures must be maintained in the heating chamber or sample. We offer our customers regular calibration of the temperature for genuine and reliable measuring results KERN 964-305,  $\notin$  **154,**-If requested, we can carry out sample analysis for you and support you in adjusting the parameters of your moisture analyser KERN 965-243,  $\notin$  **95,**-/hour Please contact your personal customer advisor if you would like us to help!

### **Quick-Finder Moisture analysers**

Readability [d]	Weighing capacity [Max]	Model	Price excl. of VAT ex works	Page	DAYS	CAL EXT	MEMORY	RS 232
g	g	KERN	€		For an	explanation on t	he pictos, see fro	nt flap
0,001	60	DBS 60-3	1350,-	44	1	•	٠	•
0,001	110	DAB 100-3	1090,-	43	1	•	•	•
0,001	160	DLB 160-3A	1270,-	45	1	•		•
0,01	200	DAB 200-2	990,-	43	1	•	•	•
							= stand	ard <b>O</b> = option



Particularly user-friendly moisture analyser with high-quality halogen quartz glass heater- also available as version with [d] = 10 mg, ideal for recurring rapid tests

· Halogen quartz glass heater 400 W

The last value measured remains on

the display until it is replaced by a

useful during initial setting

processes carried out

new measurement

• 50 sample plates included

• Observation window above the sample,

· Internal memory for automatic sequence of

15 complete drying processes and 5 drying

### Features

- KERN DAB 200-2: Version with lower resolution, whereby the switch-off criterion is reached faster, which saves time. Ideal for quick tests and spot checks
- Backlit graphic display, digit height 14 mm Drying process active
  - Active heating profile
  - Active switch-off criteria
  - Previous drying time
  - **5** Current temperature
- © Current moisture content in %

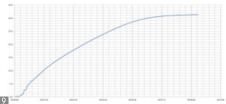


Model KERN	DAB 200-2	DAB 100-3							
Readability [d]	0,01 g/0,05 %	0,001 g/0,01 %							
Weighing capacity [Max]	200 g	110 g							
Reproducibility	1,5 %	0,15 %							
weight of sample 2 g*	1,5 %	0,15 %							
Reproducibility,	0,3 %	0,03 %							
weight of sample 10 g*	,	0,03 %							
	an be switched over at any time)								
Moisture [%] = Moisture	0	100 %							
content (M) from wet weight (W)									
Dry content [%] =	100	0-0 %							
Dry weight (D) from W									
Moisture content (M)		Absolute value in [g]							
Temperature range		n steps up to 1 °C							
	Standa	, .							
Drying modes	_∕─ Gentle	, .							
	Rapid	<u>, , , , , , , , , , , , , , , , , , , </u>							
	Automatic switch-off (2 mg loss in								
Switch-off criteria	• Time controlled switch-off (3 min -								
	Manual switch-off at the press of a								
Recall of measurement/		et from 1 s - 10 min							
Log output		I with printer or PC)							
Overall dimensions W×D×H		5×180 mm							
Net weight		32 kg							
Price €, excl. of VAT, ex works	990,-	1090,-							
Option DAkkS Calibr. Certificate		-127, € 82,-							
Option Factory Calibr. Certificate	Temperature: KERN 964-	-305, € 154,-							
application-dependent									









• Application handbook: On the internet, you will find a practical application handbook containing many examples, field reports, settings and tips for each KERN moisture analyser

### Accessories

- Sample plates aluminium, Ø 90 mm, unit of 80 pieces, KERN MLB-A01A, € 45,-
- Round fiberglass filter high mechanical stability, with organic binder, box of 100 pieces, KERN RH-A02, € 80,-
- Round fiberglass filter, medium mechanical stability, without organic binder, box of 100 pieces, KERN YMF-A01, € 40,-
- ■ Temperature calibration set consists of measuring sensor and display device, KERN DAB-A01., € 250,-
- Infrared quartz glass heater, temperature range 40 °C-160 °C, Factory Option, KERN DAB-A02, € 180,-
- RS-232/Ethernet adapter for connection to an IP-based Ethernet network, KERN YKI-01, € 310,-
- RS-232/Bluetooth adapter to connect to Bluetooth capable devices, such as Bluetooth printers, tablets, laptops, smartphones, etc.,KERN YKI-02, € **310,**-
- RS-232/WiFi adapter for wireless connection to networks and WiFi capable devices, such as tablets, laptops or smartphones, KERN YKI-03, € 740,-
- Image: Display of the drying process in conjunction with BalanceConnection, KERN SCD-4.0, € 170,-
- Thermal printer, KERN YKB-01N, € 310,Matrix needle printer, to print the weights on normal paper, ideal for long-term archiving, KERN 911-013, € 440,-

www.kern-sohn.com · Order hotline +49 7433 9933-0



### Moisture analyser with high-quality single-cell weighing system for outstanding stability, reliability and response speed

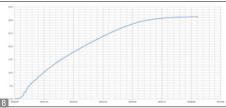
### Features

- Tip: Suitable for samples with low moisture content, e.g. plastics
- Backlit graphic display, digit height 15 mm
   Drying process active
- Previous drying time
- Current temperature
- Unit for displaying the results
- **5** Current moisture content in %
- 6 Active heating profile

- Halogen quartz glass heater 400 W
- Excellent temperature control thanks to halogen technology, suitable for temperature-sensitive samples
- Internal memory for automatic sequence of 10 complete drying processes and 100 drying processes carried out
- The last value measured remains on the display until it is replaced by a new measurement







- Password protection to prevent manipulation of stored settings, data, etc.
- Sample description for up to 99 samples,
   2 digits, freely programmable, and is printed in the measuring protocol
- Date and time display as standard
- USB data interface for transferring weighing data to the PC, printer etc. \*Can only be used in combination with KERN DBS-A02
- 10 sample plates included
- Protective working cover included with delivery
- Application handbook: On the internet, you will find a practical application handbook containing many examples, field reports, settings and tips for each KERN moisture analyser

STANDARD										
			•	GLP	$\mathcal{C}$		N <b>I</b> S			DAkkS
CAL EXT	MEMORY	RS 232	USB	INTERN	UNIT	230 V	FORCE	SC TECH	1 DAY	+3 DAYS

Modell KERN	DBS 60-3
Readability [d]	0,001 g/0,01 %
Weighing capacity [Max]	60 g
Reproducibility	0,15 %
weight of sample 2 g*	0,1070
Reproducibility,	0,02 %
weight of sample 10 g*	0,02 /0
Display after drying	
Moisture [%] = Moisture	0-100 %
content (M) from wet weight (W)	
Dry content [%] =	100-0 %
Dry weight (D) from W	
ATRO [%] [(W-D) : D] · 100%	0-999 %
Moisture content (M)	Absolute value in [g]
Temperature range	50 °C-200 °C in steps up to 1 °C
	Standard drying
Drying modes	Drying in levels
Drying modes	✓ Gentle drying
	🖵 Rapid drying
	Automatic unrestricted switch-off (Selectable loss in weight 0,01%-0,1% in 30 s)
Switch-off criteria	<ul> <li>Time controlled switch-off (1 min – 12 h)</li> </ul>
	Manual switch-off at the press of a button
Recall of measurement/	Interval can be set from 1 s – 10 min
Log output	(Only when used with printer or PC)
Overall dimensions W×D×H	204×336×167 mm
Net weight	approx. 4,6 kg
Price €, excl. of VAT, ex works	1350,-
<b>Option DAkkS Calibr. Certificate</b>	Mass: KERN 963-127, € 82,-
<b>Option Factory Calibr. Certificate</b>	Temperature: KERN 964-305, € 154,-

### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN DBS-A03S05, € 65,-
- Sample plates aluminium, Ø 90 mm, unit of 80 pieces, KERN MLB-A01A, € 45,-
- Round fiberglass filter high mechanical stability, with organic binder, box of 100 pieces, KERN RH-A02, € 80,-
- ■ Temperature calibration set consists of measuring sensor and display device, KERN DBS-A01., € 490,-
- ■ Display of the drying process in conjunction with BalanceConnection, KERN SCD-4.0, € 170,-
- USB cable, KERN DBS-A04, € 25,Software BalanceConnection, flexible recording or transfer of measurements, particularly to Microsoft® Excel or Access as well as transfer of this data to other Apps and programs. For details see page 175, scope of supplies: Download link for 1 license, KERN SCD-4.0-DL, € 150,-
- Thermal printer, KERN YKB-01N, € 310,-
- Matrix needle printer, to print the weights on normal paper, ideal for long-term
- archiving, KERN 911-013, € 440,-
- Label printer, KERN YKE-01, € 620,-

### Moisture analyser KERN DLB



# Moisture analyser with intuitive graphic display and step-by-step user guidance in 6 languages

### Features

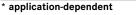
- Rapid and efficient operation thanks to the graphics display
- Backlit graphics display, digit height 11 mm
- Home screen:
   Main menu
- Iviain menu
   Stant du ving process
- Start drying processSelect drying temperature
- Select shut-off criteria
- **5** Setting to zero/taring
- 6 Stand-by

- During measurement:
- Current temperature
- Current heating profile
- Active shut-off criteria
- Abort drying process
- Stop drying process
- Display current drying parameters
- Toggle the unit for displaying the results
- At the end of the measurement:
- Exit drying program:
- **15** Print measurement report
- Id (De)activate, edit GLP parametersDisplay detailed result

I Toggle the unit for displaying the results



Modell KERN	DLB 160-3A						
Readability [d]	0,001 g/0,01 %						
Weighing capacity [Max]	160 g						
Reproducibility	0,15 %						
weight of sample 2 g*	0,15 %						
Reproducibility,	0.05 %						
weight of sample 10 g*	0,05 %						
Display after drying (Display ca	an be switched over at any time)						
Moisture [%] = Moisture	0-100 %						
content (M) from wet weight (W)	0-100 %						
Dry content [%] =	100-0 %						
Dry weight (D) from W							
ATRO [%] [(W-D) : D] · 100%	0-999 %						
Moisture content (M)	Absolute value in [g]						
Temperature range	35 °C-160 °C in steps up to 1 °C						
Drying modes	J ■ Standard drying						
Drying modes	Rapid drying, preheating can be switched on						
	<ul> <li>Automatic unrestricted switch-off (Selectable loss in weight 1 mg/30 s-10 mg/30 s)</li> </ul>						
Switch-off criteria	<ul> <li>Time controlled switch-off (1 min – 99 min)</li> </ul>						
	<ul> <li>Manual switch-off at the press of a button</li> </ul>						
Log output	<ul> <li>Interval adjustable (5 s – 250 s)</li> </ul>						
Overall dimensions W×D×H	215×345×235 mm						
Net weight	approx. 4,7 kg						
Price €, excl. of VAT, ex works	1270,-						
<b>Option DAkkS Calibr. Certificate</b>	Mass: KERN 963-127, € 82,-						
<b>Option Factory Calibr. Certificate</b>	Temperature: KERN 964-305, € 154,-						
* annitantian danandant							



### 





05

- 400 W halogen-quartz glass heater
- User guidance in 6 languages (DE, EN, FR, IT, ES, PT)
- Automatic taring when starting a measurement by closing the lid
- The last value measured remains on the display until it is replaced by a new measurement
- III Internal GLP; printout of balance ID, project ID, user ID, values determined by the drying process etc.
- 10 sample plates included
- Protective working cover included with delivery
- Application handbook: On the internet, you will find a practical application handbook containing many examples, field reports, settings and tips for each KERN moisture analyser

### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN ALJ-A01S05, € 40,-
- Sample plates aluminium, Ø 90 mm, unit of 80 pieces, KERN MLB-A01A, € 45,-
- Round fiberglass filter high mechanical stability, with organic binder, box of 100 pieces, KERN RH-A02, € 80,-
- Round fiberglass filter medium mechanical stability, without organic binder, box of 100 pieces, KERN YMF-A01, € 40,-
- Temperature calibration set consists of measuring sensor and display device, KERN DLB-A01N., € 490,-
- Thermal printer, KERN YKB-01N, € 310,-
- Matrix needle printer, to print the weights on normal paper, ideal for long-term archiving, KERN 911-013, € 440,-

# KERN FKB Page 52

- > Simple and convenient 5-key operation
- > Very fast display
- > High mobility



# **Bench** scales

### **Compact industrial weighing technology**

Thanks to their compact dimensions, low weight, robust internal mechanism and the fact that they can be operated independent of mains power, bench scales can be used not only in a stationary situation, but also as mobile scales.

With weighing ranges between 3 kg and 65 kg, bench scales can cover a wide range of applications. Whether as a commissioning scale in the warehouse, for inventory purposes, on a production work station, in quality control, in small workshops, in service cars or in sales offices, bench scales are the first choice.

Durable stainless steel weighing plates, easy to read backlit displays, useful functions such as piece counting, PRE-TARE – subtraction of a known container weight, or ► *interfaces* to PC and printer, all these support the users in their daily work. ► **Dual range** scales cover a particularly wide range of applications. With these scales, the total weighing range is divided into 2 subranges and begins with a high resolution read-out in the fine weighing range. If this range is exceeded the balance automatically switches to the higher weighing range with the lower resolution read-out.

All KERN bench scales have an adjustment program (CAL) to adjust the accuracy. In this way, the high level of accuracy is guaranteed at all times, even during harsh everyday use. Find the right test weights for you, on page 176.

▶ See the glossary on page 215–217

### **Quick-Finder Bench scales**

Readability [d]	Weighing capacity [Max]	Weighing plate W×D	Model	Price excl. of VAT ex works	Page	DAYS	М	CAL EXT	RS 232	PCS	-√+ ⊙ 🤊 ୬ TOL	MOVE	BATT	ACCU	
g	kg	mm	KERN	€			For	an expl	anation	on the p	ictos, se	e front f	lap		
0,02	6	340×240	FKB 6K0.02	520,-	52	1		•	•	•		•		0	·
0,05	6	294×225	GAB 6K0.05N	345,-	51	1		•	•	•	•			0	-
0,05	8	340×240	FKB 8K0.05	440,-	52	1		•	•	•		•	•	0	·
0,05	16	340×240	FKB 16K0.05	580,-	52	1		٠	•	•		•	•	0	
0,1	3	253×227	FCB 3K0.1	250,-	50	1		٠	•	•		•	•	0	· .
0,1	8	253×227	FCB 8K0.1	260,-	50	1		٠	•	•		•	•	0	
0,1	12	294×225	GAB 12K0.1N	345,-	51	1		٠	•	•	•			0	
0,1	16	340×240	FKB 16K0.1	480,-	52	1		٠	•	•		•	•	0	
0,1	36	340×240	FKB 36K0.1	550,-	52	1		۲	٠	٠		•	•	0	
0,2	30	294×225	GAB 30K0.2N	345,-	51	1		۲	٠	•	•			0	
0,2	36	340×240	FKB 36K0.2	510,-	52	1		۲	•	•		•	•	0	
0,2	65	340×240	FKB 65K0.2	550,-	52	1		۲	٠	•		•	•	0	
0,5	6	253×227	FCB 6K0.5	230,-	50	1		٠	•	•		•	•	0	
1	3	252×228	FCE 3K1N	130,-	49	1		۲					•	0	
1	12	253×227	FCB 12K1	205,-	50	1		٠	•			•	•	0	
1	30	340×240	FKB 30K1	320,-	52	1		۲	٠	•		•	•	0	
1	30	253×227	FCB 30K1	250,-	50	1		۲	•	•		•	•	0	
1	65	340×240	FKB 65K1	330,-	52	1		۲	٠	٠		•	•	0	
1   2	3   6	295×225	GAB 6K1DNM	260,-	51	1	0	۲	•	•	•			0	04
2	6	252×228	FCE 6K2N	130,-	49	1		۲					•	0	- 06
2	24	253×227	FCB 24K2	210,-	50	1		۲	٠	٠		•	•	0	
2   5	6   15	300×230	GAB 15K2DNM	260,-	51	1	0	۲	٠	٠	٠			0	
5	10	320×260	ECE 10K-3N	105,-	48	1		۲					•	0	
5	10	320×260	ECB 10K-3N	125,-	48	1		۲					•	0	
5	15	252×228	FCE 15K5N	130,-	49	1		٠					•	0	_
5   10	15   30	294×225	GAB 30K5DNM	260,-	51	1	0	۲	۲	٠	•			0	
10	20	320×260	ECE 20K-2N	105,-	48	1		۲					•	0	_
10	20	320×260	ECB 20K-2N	125,-	48	1		۲					•	0	
10	30	252×228	FCE 30K10N	130,-	49	1		٠					•	0	
20	50	320×260	ECE 50K-2N	105,-	48	1		۲					•	0	
20	50	320×260	ECB 50K-2N	125,-	48	1		٠					•	0	

• = standard o = option







### 06

### Plain, mobile, uncomplicated

### Features

- I High mobility: Battery operation, compact, lightweight construction, recessed grips on the underside and low weight make this balance ideal for use in several locations
- Particularly large weighing plate
- Very fast display: steady weight values within 2 s
- · Simple and convenient 2-key operation

### **Technical data**

- KERN ECB-N: Large backlit LCD display, digit height 21 mm
- KERN ECE-N: Large LCD display, digit height 21 mm
- Dimensions weighing surface W×D 320×260 mm
- Weighing plate material
   KERN ECE-N: plastic
   KERN ECB-N: stainless steel, see larger picture
- Overall dimensions W×D×H 320×300×60 mm
- Optional battery operation, 6×1.5 V AA, standard, operating time up to 100 h, AUTO-OFF function to preserve the battery
   Net weight
- KERN ECE-N: approx. 1,6 kg KERN ECB-N: approx. 2,6 kg
- Permissible ambient temperature 5 °C/35 °C

### Accessories

- Internal rechargeable battery pack, operating time up to 30 h without backlight, charging time approx. 10 h, KERN PCB-A01, € 80,-
- Rechargeable battery pack external, operating time up to 30 h without backlight, charging time approx. 10 h, KERN KS-A01, € 160,-
- Tare pan made from stainless steel. Ideal for weighing loose small parts as well as fruit, vegetables, etc., KERN RFS-A02, € 65,-
- External universal mains adapter, with universal input and optional input socket adapters for EU, GB, USA, KERN YKA-03, € 35,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDAR	D			OPTION		
					B	DAkkS
CAL EXT	BATT	DMS	1 DAY	ACCU	MULTI	+3 DAYS

Model	Weighing capacity	Readability	Reproducibility	Linearity	Price	Option	
					excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]			ex works	DAkkS	
KERN	kg	g	g	g	€	KERN	€
ECE 10K-3N	10	5	5	± 20	105,-	963-128	99,-
ECE 20K-2N	20	10	10	± 40	105,-	963-128	99,-
ECE 50K-2N	50	20	20	± 80	105,-	963-128	99,-
ECB 10K-3N	10	5	5	± 20	125,-	963-128	99,-
ECB 20K-2N	20	10	10	± 40	125,-	963-128	99,-
ECB 50K-2N	50	20	20	± 80	125,-	963-128	99,-



### Entry-level bench scale - mobile, practical, lightweight

### Features

- Simple and convenient 2-key operation
- Very fast display: steady weight values within 3 s
- I Ideal as a compact letter and parcel scale, especially where space is limited
- Ideal as a grading, comissioning or simple checkweighing scale in production or dispatch
- · Protective working cover included with delivery

### Technical data

- Large LCD display, digit height 25 mm
- Dimensions weighing surface, plastic,
- W×D 252×228 mm
- Overall dimensions W×D×H 270×323×110 mm
- Optional battery operation, 9 V block not included in scope of delivery, operating time up to 12 h, AUTO-OFF function to preserve the battery
- Net weight approx. 2,4 kg
- Permissible ambient temperature 5 °C/35 °C

### Accessories

- Protective working cover, scope of delivery:
   5 pieces, KERN FCB-A02S05, € 40,-
- I Stainless steel weighing plate, robust, removable, for easy cleaning, KERN FCE-A01, € 40,-
- Internal rechargable battery pack, operating time up to 20 h, without backlight, charging time approx. 10 h, KERN FCB-A01, € 50,-

STANDARD	)	OPTION				
		B				DAkkS
CAL EXT	BATT	MULTI	DMS	1 DAY	ACCU	+3 DAYS

Model	Weighing capacity	Readability	Reproducibility	Linearity	Price	Option	
						DAkkS Calibr. Ce	ertificate
	[Max]	[d]			ex works	DAkkS	
KERN	kg	g	g	g	€	KERN	€
FCE 3K1N	3	1	2	± 3	130,-	963-127	82,-
FCE 6K2N	6	2	2	± 4	130,-	963-128	99,-
FCE 15K5N	15	5	10	± 15	130,-	963-128	99,-
FCE 30K10N	30	10	10	± 30	130,-	963-128	99,-







06



### 06

### Bench scale with second display on the backside of the scale

### Features

- PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels
- High mobility: thanks to battery operation/ rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations (production, warehouse, dispatch department etc.)
- Data interface RS-232 standard
- Protective working cover included with delivery

### Technical data

- Backlit LCD display, digit height 25 mm
- Dimensions of weighing surface, stainless steel, W×D 253×227 mm
- Overall dimensions W×D×H 270×323×110 mm
- Optional battery operation, 9 V block not
- included in scope of delivery, operating time up to 12 h
- Net weight approx. 2,6 kg
- Permissible ambient temperature 5  $^\circ\text{C}/35$   $^\circ\text{C}$

### Accessories

- Protective working cover, scope of delivery:
  5 pieces, KERN FCB-A02S05, € 40,-
- Internal rechargable battery pack, operating time up to 10 h, without backlight, charging time approx. 10 h,, KERN FCB-A01, € 50,-
- Further details, plenty of further accessories and suitable printers see *Accessories*



Model	Weighing capacity	Readability	Reproducibility	Linearity	Smallest part	Price	Option	
					weight	1	DAkkS Calibr. Ce	rtificate
	[Max]	[d]			[Normal]	ex works	DAkkS	
KERN	kg	g	g	g	g/piece	€	KERN	€
FCB 3K0.1	3	0,1	0,1	± 0,3	2	250,-	963-127	82,-
FCB 8K0.1	8	0,1	0,1	± 0,3	2	260,-	963-128	99,-
FCB 6K0.5	6	0,5	0,5	± 1,5	10	230,-	963-128	99,-
FCB 12K1	12	1	1	± 3	20	205,-	963-128	99,-
FCB 30K1	30	1	1	± 3	20	250,-	963-128	99,-
FCB 24K2	24	2	2	± 6	40	210,-	963-128	99,-





### Checkweighing and portioning scale, also with EC type approval [M]

### Features

- · Compact size, practical for small spaces
- · High mobility: thanks to rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations (production, warehouse, dispatch department etc.)
- Weighing with tolerance range (checkweighing): a visual and audible signal helps with portioning, dispensing or grading
- Totalising of weights
- · Protective working cover included with delivery

### **Technical data**

- · Large backlit LCD display, digit height 24 mm
- Dimensions weighing surface W×D
- 295×225 mm Overall dimensions W×D×H, 320×345×125 mm
- Net weight approx. 3,0 kg
- · Permissible ambient temperature GAB-N: 0 °C/40 °C GAB-DNM: -10 °C/40 °C

### Accessories

- · Protective working cover, scope of delivery: 5 items, KERN CFS-A02S05, € 40,-
- Internal rechargeable battery pack, operating time up to 90 h without backlight, charging time approx. 12 h, KERN GAB-A04, € 40,-
- I Signal lamp for visual support of weighing with tolerance range, only in combination with, KERN CFS-A03, € 280,-

 Y-cable for parallel connection of two terminal devices to the RS-232 interface on the scale, e.g. signal lamp and printer, KERN CFS-A04, € 35,-

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- Tare pan made from stainless steel. Ideal for weighing loose small parts as well as fruit, vegetables, etc., KERN RFS-A02, € 65,-
- · Further details, plenty of further accessories and suitable printers see Accessories

### **Application examples**

- · Small industrial scale for pharmacies
- Hand mixtures of tea, coffee, chocolates
- Portioning of dough, meat, fish, poultry, mixed salads in cafeterias etc.
- · Mobile weighing of freshly picked fruit on site
- Checkweigher in supermarkets
- · High-precision industrial applications, piece counting or stock-taking

Note: Official verification is mandatory for commerical trade.



Model	Weighing	Readability	Verification	Minimal load	Smallest part	Price			Option		
	capacity		value		weight	excl. of VAT	Verification		on DAkkS Calibr. Cer		
	[Max]	[d]	[e]	[Min]	[Normal]	ex works	MIII	€	DAkkS		
KERN	kg	g	g	g	g/piece	€	KERN	€	KERN	€	
GAB 6K0.05N	6	0,05	-	-	0,5	345,-	-	-	963-128	99,-	
GAB 12K0.1N	12	0,1	-	-	1	345,-	-	-	963-128	99,-	
GAB 30K0.2N	30	0,2	-	-	2	345,-	-	-	963-128	99,-	
	Dual-range balance switches automatically to the next largest weighing capacity [Max] and readibility [d]										

Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible.

	Verification at the factory, we need to know the full address of the location of use.										
GAB 6K1DNM	<b>3</b>   6 1   2 1   2 20 2 <b>260,-</b> 965-228 70,- 963-128 99,-										
GAB 15K2DNM	NM 6   15 2   5 2   5 40 5 <b>260,-</b> 965-228 70,- 963-128 99,-										
GAB 30K5DNM	15   30	5   10	5   10	100	10	260,-	965-228	70,-	963-128	99,-	









# High-resolution bench scale with large weighing range and robust stainless steel weighing plate

### Features

- Thanks to the high resolution of up to 360.000 points it is ideal for high-precision weighing in the industrial field
- Housing with robust aluminium diecast housing trough, maintains the stability, protects the weighing technology elements and is robust enough to cope with everyday use
- III Particularly practical: thanks to the large weighing ranges and compact dimensions, you can accurately weigh heavy loads in the most restricted of spaces. Useful for determining very small weight differences, such as, for example, gas wastage, abrasion of mechanical parts, rock samples, minerals, druses, silver etc.
- PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels

- Freely programmable weighing unit, e.g. display direct in special units such as length of wire g/m, surface weight g/m<sup>2</sup>, or else
- Model with resolution > 240,000 Pt.: Level indicator and levelling feet for precise levelling of the scale, fitted as standard
- · Protective working cover included with delivery

### **Technical data**

- Backlit LCD display, digit height 25 mm
- Dimensions weighing surface, stainless steel, 
   Ethernet interface to connect to an
   W×D 340×240 mm
   IP-based Ethernet network, must be
- Dimensions housing W×D×H, 350×390×120 mm
- Optional battery operation, 6×1.5 V Size C not included in scope of delivery, operating time up to 80 h
- Permissible ambient temperature 10 °C/40 °C

### Accessories

- Protective working cover, scope of delivery: 5 items, KERN FKB-A02S05, € 40,-
- Rechargeable battery pack external, operating time up to 48 h without backlight, charging time approx. 8 h, KERN PCB-A01, € 80,-
- USB data interface, for transferring weighing to the PC, printer etc., must be ordered at purchase, KERN CKE-A02, € 65,-
- WiFi data interface for wireless data transmission from balance to printer, PC or other peripheral devices, must be ordered at purchase, KERN YMI-A01, € 90,Ethernet interface to connect to an IP-based Ethernet network, must be ordered
- at purchase, KERN FKB-A01, € 30,-• Tare pan made from stainless steel. Ideal for
- weighing loose small parts as well as fruit, vegetables, etc., KERN RFS-A02, € 65,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD	OPTION	FACTORY
Image: Calexit rs 232     PCS     PCS </td <td>ET ACCU +3 DAYS</td> <td>USB</td>	ET ACCU +3 DAYS	USB

Model	Weighing ca-	Readability	Reproducibility	Linearity	Smallest part	Net weight	Price	Option	
	pacity				weight		excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]			[Normal]	approx.	ex works	DAkkS	
KERN	kg	g	g	g	g/piece	kg	€	KERN	€
FKB 6K0.02	6	0,02	0,04	± 0,1	0,2	7	520,-	963-128	99,-
FKB 8K0.05	8	0,05	0,05	± 0,15	0,5	7	440,-	963-128	99,-
FKB 8K0.1	8	0,1	0,1	± 0,3	2	6	350,-	963-128	99,-
FKB 15K0.5	15	0,5	0,5	± 1,5	10	6	350,-	963-128	99,-
FKB 16K0.05	16	0,05	0,1	± 0,25	0,5	7	580,-	963-128	99,-
FKB 16K0.1	16	0,1	0,1	± 0,3	1	7	480,-	963-128	99,-
FKB 30K1	30	1	1	± 3	20	6	320,-	963-128	99,-
FKB 36K0.1	36	0,1	0,2	± 0,5	1	7	550,-	963-128	99,-
FKB 36K0.2	36	0,2	0,2	± 0,6	2	7	510,-	963-128	99,-
FKB 65K0.2	65	0,2	0,4	± 1	2	7	550,-	963-129	122,-
FKB 65K1	65	1	1	± 3	20	6	330,-	963-129	122,-



# KERN FGE 10K-3S05 Page 55

- > Weighing plate made of safety glass
- > For easy and hygienic cleaning
- > Low overall height for secure footing and space-saving storage

# Food (kitchen/stainless steel/IP65...68 protection)

### KERN scales - not scared of water at all!

Scales used in industrial situations or the food industry are often exposed to extreme stresses and strains. Water, oils, fats, varnish, dust, dirt, flour, small parts etc. are all natural enemies of a scale. In industries such as the chemical, pharmaceutical, food, manufacturing industries, etc. scales must be able to cope with these stresses without this affecting their performance.

For use in such harsh environmental conditions, levels of protection are defined, which specify which environmental stresses a system can be exposed to with respect to the level of contact, foreign object and moisture protection, without damage being caused to the unit. These levels of protection are described in the following standard: "DIN EN 60529: protection types through housing" The IP code usually consists of a two-digit combination, which gives the relevant level of protection, e.g. IP68. The first digit specifies the protection level for contact protection and protection against foreign bodies (dust protection), the second digit is for the water and moisture protection (protection against splashes of water).

All stainless steel components of the IP65...68 protected KERN stainless steel scales are made of corrosion-resistant steel of quality class 1.4301 (DIN X5CrNi18-10). The material properties support you in your► *HACCP*-compliant quality system.

▶ See the glossary on page 215–217

### Extract from the standard: "DIN EN 60529: protection types through housing":

KERN-Pictogram	1. digit	Specification	2. digit	Specification
<b>66</b> IP 65	6	Dustproof	5	Protection against jets of water (nozzle) from any angle (cleaning with a damp cloth)
000 IP 66	6	Dustproof	6	Protection against powerful jets of water
<b>0 0 0 1</b> P 67	6	Dustproof	7	Protection against temporary immersion
000 IP 68	6	Dustproof	8	Protection against continuous immersion (designed for continuous use in wet areas, submersion is possible depending on the pressure (water depth))

## **Quick-Finder Food (kitchen/stainless steel/IP65...68 protection)**

int         int         int         Prot an explanation on the plotos, see from flag.           0.1         0.5         POB 500-06.44.8         110,         58         I         Image: Control of the plotos, see from flag.           0.1         1.5         POB 50.44.4         210,         58         Image: Control of the plotos, see from flag.           0.2         1.5         POB 51.44.4         230,         60         Image: Control of the plotos, see from flag.           0.5         1.5         POB 14.44.41         285,         57         Image: Control of the plotos, see from flag.         Image: Control of the plotos, see from flag.           0.5         1.5         POB 14.44.41         285,         57         Image: Control of the plotos, see from flag.         Image: Control of the plotos, see from flag.           0.5         1.5         POB 14.44.41         285,         57         Image: Control of the plotos, see from flag.         Image: Control of the plotos, see from flag.           0.5         3         PFN 34.44.40         205,         40         Image: Control of the plotos, see from flag.           0.5         1.5         PFN 34.44.40         205,         40         Image: Control of the plotos, see from flag.           0.5         1.5         PFN 34.44.40         20         Image: Control of	Readability [d]	Weighing capacity [Max]	Model	Price excl. of VAT ex works	Page	DAYS	м	CAL EXT	RS 232	-√+ ③ ③ッ TOL	<b>4 4 4 1 P 6 5</b>	<b>4 4 4</b> IP 67	<b>4 4 4</b> IP 68	ACCU
0.1       0.5       FOB 05:4:483       10       98       1       0         0.1       3       FCP 3K:4       210,56       1       0       0         0.1       3       FCP 3K:4       210,56       1       0       0         0.2       1.5       FCP 3K:4       285,57       1       0       0       0         0.5       1.5       FOB 150:3       FOB 150:3       10       0       0       0         0.5       1.5       FOB 150:3       FOB 150:3       10       0       0       0       0         0.5       3       FFN 360:3FN       275,6       1       0       0       0       0         0.5       3       FFN 360:3FN       275,6       1       0       0       0       0       0         1       3       FFN 360:3FN       275,6       1       0			KERN					For an	explanatio	n on the pi	ctos, see f	ront flap		
0.1       0.5       FOB ASCANS       110, 58       1       •       •       •         0.2       1.5       WTB IKAN       280, 59       1       •       •       •         0.2       1.5       FOB SKANL       280, 59       1       •       •       •         0.5       1.5       FOB SKANL       285, 59       1       •       •       •       •         0.5       1.5       FOB SKANL       285, 69       10       •       •       •       •       •         0.5       1.5       FOB SKANL       285, 69       10       •			FOB 500-1S	85	58	1		•						
1.3       WTB IK-M       280, 60       1       •       •       •         2.3       5       FFN IK-M       280, 60       1       •       •       •         2.3       5       FFN IK-M       280, 60       1       •       •       •       •         2.3       1.5       WTB IK-MM       285, 60       1       •       •       •       •       •         2.5       1.5       WTB IK-MM       260, 60       1       • <td></td> <td></td> <td>FOB 0.5K-4NS</td> <td></td> <td></td> <td>1</td> <td></td> <td>٠</td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td>			FOB 0.5K-4NS			1		٠			•			
0.2       3.6       FFN IKAN       280, 59       1       •       •         0.5       1,5       FOB IKALM       285, 59       1       0       •       •         0.5       1,5       FOB IKALM       285, 59       1       0       •       •         0.5       1,5       FFN IKANM       310, 61       1       0       •       •         0.5       3       FFN IKANM       200, 60       1       •       •       •         0.5       3       FFN IKANM       200, 60       1       •       •       •       •         0.5       3       FFN IKANM       200, 60       1       •       •       •       •       •       •         0.5       3       FFN IKAN       200, 60       1       •       <								٠						0
0.2       3       F08 3K-4NL       285, 597       1       0       0         0.5       1.5       F08 1K-4NL       285, 597       1       0       0       0         0.5       1.5       F08 1K-4NL       285, 597       1       0       0       0         0.5       3       WT8 3K-4NL       250, 60       1       0       0       0         0.5       3       FFN 3K-4NL       240, 59       1       0       0       0         0.5       3       FFN 3K-4NL       240, 59       1       0       0       0       0         0.5       5       760 7K-4NL       245, 59       1       0       0       0       0       0       0         0.5       760 7K-4NL       245, 59       10       0 <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td></td> <td>0</td>						-				•				0
0.5       1.5       FOB IK-LLM       285,       57       1       0       •       •       •         0.5       1.5       FOB IKAND       205,       50       1       0       •       •       •         0.5       1.5       WTB SKAND       205,       60       1       0       •       •       •         0.5       3       FTN SKAND       200,       62       1       •       •       •       •         0.5       1       5       7.5       FOB 7K-4NL       245,       59       1       •														•
0.5       1.5       FOB 1.5KO.5       195,       50       1       •       •         0.5       1.5       FFN IK-4MM       310,       61       1       •       •       •         0.5       1.5       FFN IK-4MM       310,       61       1       •       •       •       •         0.5       3       FFN IK-4MM       250,       60       1       •       •       •       •         0.5       1.5       FFN IK-4MM       400,       62       1       •<						•		-						
5.5       1.5       WTB IK-ANM       26.5       6.0       1       0       •       •         5.5       1.5       FFN IK-AM       30.0       61       1       0       •       •         5.5       3.5       WTB 3K-AN       250.0       60       1       •       •       •       •         5.5       3.5       WTB 3K-AN       250.0       60       1       •       •       •       •         0.5       1.5       FKN 3K-AK       1030.0       64       1       •							0	-						0
0.5       1.5       FFN IK-4NM       310, 6       0							0				•			0
0.5       3       FN 3K0.5IPN       295,						1	0	۲			•			•
0.5       3       FXN 3K-ANL       400,       62       1       •       •       •         0.5       6       SXS 6K-3       1030,       64       1       •       •       •         1       3       CP0 3 K-1LM       205,       57       1       0       •       •       •         1       3       CP0 3 K-3LM       205,       60       1       0       •       •       •         1       3       FKN 3K-3M       400,       62       1       0       •       •       •         1       3       FKN 3K-3M       440,       62       1       0       • </td <td></td> <td>3</td> <td>WTB 3K-4N</td> <td>250,-</td> <td>60</td> <td>1</td> <td></td> <td>۲</td> <td></td> <td>٠</td> <td>•</td> <td></td> <td></td> <td>0</td>		3	WTB 3K-4N	250,-	60	1		۲		٠	•			0
0.5       0.5       0.5       7.5       FOB 7K-4NL       245,57       0       0       0         1       3       FOB 3K 3LM       285,57       1       0       0       0         1       3       FOB 3K 3LM       285,57       1       0       0       0       0         1       3       WTB 3K 3LM       285,60       1       0       0       0       0         1       3       FFN 3K 3LM       285,60       1       0       0       0       0         1       5       FOB 5K SUS       85,58       1       0       0       0       0       0         1       6       FFN 6K 18       85,58       1       0														•
0.5       64       1       0       0       0         1       3       FOB 3K1 ML       285, 57       1       0       0       0         1       3       FOB 3K1 ML       285, 57       1       0       0       0       0         1       3       FFR 3K1PM       310, 61       1       0       0       0       0         1       3       FFR 3K10PM       310, 61       1       0       0       0       0         1       5       FOB 5K10S       100, 58       1       0       0       0       0         1       6       FFN 6K3NS       250, 60       1       0				/		-		-		•			•	
1       3       FO8 3K-3LM       285, 57       1       0       •       •         1       3       WTB 3K-3MM       265, 60       1       0       •       •         1       3       FFN 3K-3M       265, 60       1       0       •       •         1       3       FKN 3K-3M       440, 25       1       0       •       •         1       5       FGE 3K-3805       10, -55       55       •       •       •         1       6       FFN 6K-30       250, -60       1       •       •       •       •         1       6       FFN 6K-30       250, -60       1       •       •       •       •       •       •         1       15       SKS 10K-30       1000, -63       1       •						1								
1       3       FOB SK1       195, 59       1       ●         1       3       FFN 3K1IPM       310, 61       1       0       ●         1       3       FFN 3K3M       440, 62       0       ●       ●         1       5       FF08 5K1S       85, 58       1       ●       ●         1       5       FF08 5K3805       10, 58       1       ●       ●       ●         1       5       FF08 5K3805       10, 58       58       1       ● <td< td=""><td>,</td><td></td><td></td><td></td><td></td><td>1</td><td>0</td><td>-</td><td></td><td>-</td><td></td><td></td><td></td><td></td></td<>	,					1	0	-		-				
1       3       WTB 3K-3NM       265, 60       1       0       ●       ●         1       3       FKN 3K-3M       440, 62       1       0       ●       ●         1       5       FGE 5K-3605       10, 63       0       ●       ●         1       5       FOB 8K 1S       85, 83       1       ●       ●         1       6       WTB 8K-3NB       10, 63       1       ●       ●       ●         1       6       WTB 8K-3NB       10, 63       1       ● <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td>0</td></t<>								-						0
1       3       FN 3K1IPM       310, 61       1       0       •       •         1       5       FNS K3M       440, 62       1       0       •       •         1       5       FOS KNS       85, 58       1       •       •       •         1       5       FOS KNS       85, 58       1       •       •       •         1       6       WTB 6K-3N       250, 60       1       •       •       •         1       0       FFN 6K1IP       235, 60       1       •       •       •         1       15       SKS 10K-31       1290, 64       1       •						1	0	•		•	•			0
1       5       FOE 5K 3805       110,**       55       1         1       5       FOE 5K 18       85,*       58       1       •         1       6       WTE 6K 3N       220,*       60       1       •       •         1       6       FKN 6K 18*       225,*       61       1       •       •       •         1       6       FKN 6K 18*       225,*       61       1       •       •       •       •         1       15       FKB 10K 11P       790,*       63       1       • <t< td=""><td>1</td><td></td><td></td><td></td><td></td><td>1</td><td>0</td><td>٠</td><td></td><td></td><td>•</td><td></td><td></td><td>•</td></t<>	1					1	0	٠			•			•
1       5       FOB 5K1S       85, 58       1       •         1       6       WTB 6K-3NS       250, 60       1       •       •         1       6       FFN 6K-3NS       250, 60       1       •       •         1       6       FFN 6K-3N       400, 62       1       •       •       •         1       10       SFR 10K-3S       103, 64       1       •       •       •       •         1       15       SK 10K-3       103, 64       1       • <t< td=""><td>1</td><td></td><td></td><td>440,-</td><td></td><td>1</td><td>0</td><td>۲</td><td></td><td>•</td><td></td><td></td><td>•</td><td></td></t<>	1			440,-		1	0	۲		•			•	
1       5       POB 5K-3NS       110, 58       58       1       ●         1       6       FKN 6K1IPN       295, 60       1       ●       ●         1       6       FKN 6K1IPN       295, 61       1       ●       ●         1       10       SFB 10K1HIP       790, 63       1       ●       ●       ●         1       15       FSE 10K1HIP       790, 64       1       ● <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	-							-						
1       6       WTB 6K:3N       250, 60       1       ●         1       6       FKN 6K:IPN       295, 61       1       ●         1       10       SFB 10K:3N       400, 62       1       ●       ●         1       15       FGE 10K:3S05       160, *       55       1       ●       ●       ●       ●         1       15       SX5 10K-3       120, *       55       1       ●	-													
1       6       FKN 6K3N       295,61       1       ●         1       10       SFB 10K1HIP       790,63       1       ●       ●         1       15       FGE 10K1HIP       790,63       1       ●       ●         1       15       SXS 10K-3L       1030,64       1       ●       ●         1       15       SXS 10K-3L       1290,64       1       ●       ●         1       20       FCF 30K-3       210,56       1       ●       ●         1       2       8       15       FOB 10K-3NL       245,59       1       ●       ●         2       6       FOB 6K3L       195,59       1       ●       ●       ●         2       6       FKN 6K-3NM       265,60       1       0       ●       ●         2       15       FKN 15K2IPN       255,60       1       ●       ●       ●       ●       ●         2       15       FKN 16K-3M       200,62       1       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●								-						
1       0       FXN 6K-3N       400,       62       1       ●       ●         1       15       FGE 10K-3505       160,~*       55       1       ●       ●       ●         1       15       SXS 10K-3       1030,~       64       1       ●       ●       ●         1       30       FGF 30K-3       210,~       56       1       ●       ●       ●         1       2       8       16       FOS 30K-3       210,~       56       1       ●       ●       ●         2       6       FOB 6K-3LM       245,~       57       1       ●										-				<u> </u>
1       10       SFB 10K1HIP       790,       63       1       ●       ●       ●         1       15       SK3 10K-30       1030,       64       1       ●       ●         1       15       SK3 10K-31       1200,       64       1       ●       ●         1       30       FCF 30K-3       210,.       56       1       ●       ●         1       2       3       6       SK3 6K-3M       870,.       64       1       ●       ●       ●         2       6       FOB 6K-3LM       245,.       59       1       ●       ●       ●       ●         2       6       FOB 6K-3LM       265,.       60       1       0       ● <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>•</td><td></td></t<>													•	
1       15       FGE 10K-3805       1030, -       55       1       •         1       15       SXS 10K-31       1030, -       64       1       •       0       •         1       15       SXS 10K-31       1200, -       64       1       •       0       •         1       2       3       16       SXS 6K-3M       B70, -       64       1       •       •       •         1       2       3       16       FOS 6K-3L       245, -       57       1       • </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td> <td></td> <td>•</td> <td>•</td> <td></td> <td>•</td>									0		•	•		•
1       15       SX 10K-3L       1290, 64       1       •       •       •         1       30       FCF 30K-3       210, 56       1       •       •       •         1       2       31       6       SX 6K-3ML       245, 59       1       •       •       •         1       2       8       15       FOB 10K-3NL       245, 59       1       •       •       •       •         2       6       FOB 6K-3LM       245, 59       1       •	1			/		1								
1       30       FCF 30K-3       210,       56       1       •         1       2       8       15       FOB 10K-3NL       245,       59       1       •       •         2       6       FOB 6K-3LL       245,       59       1       •       •       •         2       6       FOB 6K-3LL       255,       59       1       •       •       •         2       6       FFN 6K-3PM       310,-       61       1       •       •       •         2       6       FFN 6K-3PM       240,-       62       1       •       •       •         2       15       FFN 16K-3N       250,-       60       1       •       •       •       •         2       15       FFN 16K-3N       200,-       62       1       •       •       •       •       •         2       20       SFS 30K-2       120,-       64       1       • </td <td></td> <td></td> <td>SXS 10K-3</td> <td></td> <td>64</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td>			SXS 10K-3		64	1								0
1       2       3       6       SXS 6K-3M       870,-       64       1       0       0       ●         2       6       FOB 6K-3LM       285,-       57       1       0       ●       ●         2       6       FOB 6K2       195,-       59       1       0       ●       ●         2       6       FTB 6K-3NM       265,-       60       1       0       ●       ●         2       6       FTM 6K3M       400,-       62       1       0       ●       ●         2       15       FTM 15K2IPN       256,-       60       1       ● </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td>0</td> <td>•</td> <td></td> <td></td> <td></td> <td>0</td>						1			0	•				0
1       2       6       FOB 10K-SNL       245,-       59       1       ●       ●         2       6       FOB 6K2       195,-       59       1       ●       ●         2       6       FTB 6K-3NL       265,-       60       1       0       ●       ●         2       6       FTN 6K-3NL       205,-       60       1       0       ●       ●         2       15       WTB 10K-3NL       250,-       60       1       0       ●       ●         2       15       FXN 10K-3NL       295,-       61       1       ●       ●       ●         2       15       FXN 10K-3NL       400,-       62       1       ●       ●       ●         2       15       FXN 10K-3NL       400,-       62       1       ●	· ·													0 0
2       6       F08 6K-3LM       285,       57       1       0       ●         2       6       WTB 6K-3NM       255,       60       1       0       ●         2       6       FKM 6K-3IM       440,-       62       1       0       ●         2       15       FKM 6K-3IM       440,-       62       1       0       ●         2       15       FKM 15K 2IPN       295,-       61       1       ●       ●         2       15       FKM 15K 2IPN       295,-       61       1       ●       ●         2       30       SK3 30K-2L       1200,-       64       1       ●       ●       ●         2       30       SK3 30K-2L       1500,-       64       1       ●       ●       ●         2       15       61       15       SK3 10K-3IM       245,-       57       1       ●       ●       ●         2       16       15       KS1 10K-3IM       245,-       57       1       ●       ●       ●       ●         5       15       FKN 10K-3IM       245,-       57       1       ●       ●       ●       ● </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td> <td></td> <td>0</td> <td></td> <td></td> <td></td> <td>•</td> <td>0</td>							0		0				•	0
2       6       FOB 6K2       195, 59       1       ●         2       6       FFN 6K2IPM       310, 61       1       0       ●         2       6       FFN 6K2IPM       310, 62       0       ●         2       6       FKN 6K-3M       440, 62       0       ●         2       15       FKN 10K-3N       250, 60       1       ●       ●         2       15       FKN 10K-3N       400, 62       1       ●       ●         2       15       FKN 10K-3N       400, 62       1       ●       ●         2       30       SXS 30K-2L       1890, 64       1       ●       ●         15       6       15       SXS 10K-3M       870, 64       1       ●       ●         15       6       15       SXS 10K-3M       285, 57       1       ●       ●         5       15       FFN 15K3IPM       310, 61       1       0       ●       ●         5       15       FFN 15K3IPM       310, 62       1       ●       ●       ●         5       15       FFN 15K3IPM       290, 63       1       ●       ●       ● <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							0							
2       6       WTB 6K-3NM       265,       60       1       ○       ●         2       6       FKN 6K-3M       440,-       62       1       ○       ●         2       15       WTB 10K-3M       295,-       61       1       ●       ●         2       15       FKN 10K-3M       400,-       62       1       ●       ●         2       15       FXN 10K-3M       400,-       62       1       ●       ●         2       20       SFB 20K2HIP       790,-       64       1       ●       ●       ●         2       30       SXS 30K-2       1290,-       64       1       ○       ●       ●         2       30       SXS 30K-2       1290,-       64       1       ○       ○       ●         15       6   15       SXS 10K-3M       870,-       64       1       ○       ○       ●       ●         15       16   30       SXS 10K-3M       245,-       59       1       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●       ●<						-								0
2       6       FXN 6K-3M       440, 62       1       0       ●         2       15       FFN 16K/2IPN       295, 61       1       ●       ●         2       15       FFN 16K/2IPN       295, 61       1       ●       ●         2       15       FFN 16K/2IPN       290, 64       1       ●       ●         2       30       SX8 30K-2       1290, 64       1       ●       ●       ●         2       30       SX8 30K-2       1290, 64       1       ●		-				1	0	•			•			0
2       15       WTB 10K:3N       250, 60       1       •       •         2       15       FFN 15K2IPN       295, 61       1       •       •         2       20       SFB 20K2HIP       790, 63       1       •       •       •         2       30       SK3 30K-2       1290, 64       1       •       •       •         2       30       SK3 30K-2       1290, 64       1       •       •       •         2       30       SK3 10K-3LM       870, 64       1       •       •       •         15       6       15       SK3 10K-3LM       285, 57       1       •       •       •         5       15       FOB 10K-3LM       285, 57       1       •       •       •         5       15       FN 10K-3M       265, 60       1       •       •       •       •         5       15       FN 10K-3M       265, 60       1       •       •       •       •       •         5       15       FN 10K-3M       250, 60       1       •       •       •       •       •       •         5       30       FN 30K-3N </td <td></td> <td>6</td> <td>FFN 6K2IPM</td> <td>310,-</td> <td>61</td> <td>1</td> <td>0</td> <td>٠</td> <td></td> <td></td> <td>•</td> <td></td> <td></td> <td>•</td>		6	FFN 6K2IPM	310,-	61	1	0	٠			•			•
2       15       FN 15k2IPN       295, 61       1       •       •         2       15       FXN 10K-3N       400, 62       1       •       •       •         2       30       SXS 30K-2       1290, 64       1       •       •       •       •         2       30       SXS 30K-2       1290, 64       1       •       •       •       •         2       30       SXS 30K-2       1580, 64       1       •       •       •       •       •         2       15       6       15       SXS 10K-3M       870, 64       1       •       •       •       •         2       15       15       SXS 10K-3M       870, 64       1       •       •       •       •       •         5       15       FN 15K03M       265, 57       1       •<			FXN 6K-3M	440,-		1	0	٠		٠			•	
2       15       FXN 10K-3N       400,-       62       1       •       •         2       20       SFB 20K2HIP       790,-       63       1       •       •       •         2       30       SXS 30K-2       1290,-       64       1       •       •       •       •         2       30       SXS 30K-2       1580,-       64       1       •       •       •       •         2       5       6       15       SXS 10K-3IM       870,-       64       1       •       •       •         2       5       6       15       SXS 10K-3IM       285,-       57       1       •       •       •       •         5       15       FFN 15KSIPM       205,-       60       1       •										•				0
2       20       SFB 20K2HIP       790,-       63       1       •						•		-			•			•
2       30       SXS 30K-2       1290,-       64       1       •       •       •         2       30       SXS 30K-2L       1580,-       64       1       •       •       •         2       5       6       15       SXS 10K-3LM       1120,-       64       1       •       •       •         2       5       15       SXS 10K-3LM       245,-       59       1       •       •       •         5       15       FOB 30K-S1ML       245,-       59       1       •       •       •       •         5       15       FFN 15KSIPM       310,-       61       1       • <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>•</td> <td>•</td>								-					•	•
2       30       SXS 30K-2L       1580,-       64       1       •       •       •         2       5       6       15       SXS 10K-3LM       870,-       64       1       0       •         2       5       15       SXS 10K-3LM       1120,-       64       1       0       •       •         5       15       FOB 10K-3LM       245,-       57       1       •       •       •       •         5       15       FFN 15KSHPM       310,-       61       1       0       •       •       •         5       15       FFN 15KSHPM       310,-       62       1       0       •       •       •         5       15       FFN 15KSHPM       810,-       63       1       0       •       •       •       •         5       25       FFN 25KSHPN       295,-       61       1       •<						1		-						0
21       5       6   15       SXS 10K-3M       870,-       64       1       0       0       0         21       5       6   15       SXS 10K-3L       1120,-       64       1       0       0       0         5       15       FOB 30K-3LM       245,-       59       1       •       •       •         5       15       FOB 10K-3LM       225,-       57       1       0       •       •       •         5       15       FFN 15KS1PM       310,-       61       1       0       •       •       •         5       15       FFN 15KS1PM       810,-       63       1       0       •       •       •       •         5       30       WTB 30K-3N       250,-       60       1       •						1							•	
2   5       16   30       FOB 30K-3NL       245,-       59       1       •       •         5       15       FOB 10K-3LM       285,-       57       1       0       •       •         5       15       FFN 15KSIPM       310,-       61       1       0       •       •         5       15       FFN 15KSIPM       810,-       63       1       0       •       •         5       15       SFB 15KSHIPM       810,-       63       1       0       •       •       •         5       30       WTB 30K-3N       250,-       60       1       •						1	0	•	0	•			•	0
5       15       FOB 10K-3LM       285,-       57       1       0       •       •         5       15       WTB 10K-3NM       265,-       60       1       0       •       •         5       15       FFN 15KSIPM       310,-       61       1       0       •       •         5       15       FFN 15KSIPM       810,-       63       1       0       •       •         5       35       SFB 15KSHPM       810,-       63       1       •       •       •       •         5       30       WTB 30K-3N       250,-       60       1       • <td>2   5</td> <td></td> <td></td> <td>1120,-</td> <td>64</td> <td>1</td> <td>0</td> <td>۲</td> <td>0</td> <td>٠</td> <td></td> <td></td> <td>٠</td> <td>0</td>	2   5			1120,-	64	1	0	۲	0	٠			٠	0
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5       25       FFN 25K5IPN       295,-       61       1       •       •         5       30       WTB 30K-3N       250,-       60       1       •       •         5       30       FXN 30K-3N       400,-       62       1       •       •         5       50       SFB 50K-3XL       890,-       63       1       •       •       •         5       50       SFB 50K5HIP       790,-       63       1       •       •       •       •         5       50       SFB 50K5HIP       760,-       63       1       •				/					0					•
5       30       WTB 30K-3N       250,-       60       1       •       •         5       30       FXN 30K-3N       400,-       62       1       •       •         5       50       SFB 50K-3XL       890,-       63       1       •       •       •         5       50       SFB 50KSLHIP       790,-       63       1       •       •       •       •         5       50       SFB 50KSLHIP       760,-       63       1       • <td></td> <td>-</td> <td></td> <td></td> <td></td>											-			
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5       60       SXS 60K-2       1310,-       64       1       •       •       •         5       60       SXS 60K-2L       1580,-       64       1       •														•
5       60       SXS 60K-2L       1580,-       64       1       •       •         5       10       15       30       SXS 30K-2M       1120,-       64       1       •       •         10       15       30       SXS 30K-2LM       1370,-       64       1       •       •       •         10       25       FFN 25K10IPM       310,-       61       1       •       •       •         10       30       WTB 30K-2M       265,-       60       1       •       •       •       •         10       30       FXN 30K-2M       440,-       62       1       •       •       •       •         10       30       SFB 30K10HIPM       820,-       63       1       •       •       •       •       •         10       100       SFB 100K10HIP       790,-       63       1       • <td></td> <td>•</td> <td>•</td> <td></td> <td>•</td>											•	•		•
5       10       15       30       SXS 30K-2M       1120,-       64       1       0       0       0         10       15       30       SXS 30K-2LM       1370,-       64       1       0       0       0         10       25       FFN 25K10IPM       310,-       61       1       0       0       0         10       30       WTB 30K-2NM       265,-       60       1       0       0       0         10       30       FXN 30K-2M       440,-       62       1       0       0       0         10       30       FFB 10K10HIP       820,-       63       1       0       0       0       0         10       100       SFB 100K10HIP       790,-       63       1       0														0
5       10       15       30       SXS 30K-2LM       1370,-       64       1       0       •       •         10       25       FFN 25K10IPM       310,-       61       1       0       •       •       •         10       30       WTB 30K-2NM       265,-       60       1       0       •       •       •         10       30       FXN 30K-2M       440,-       62       1       0       •       •       •         10       30       SFB 30K10HIPM       820,-       63       1       •       <							0						•	0
10       25       FFN 25K10IPM       310,-       61       1       0       •       •         10       30       WTB 30K-2NM       265,-       60       1       0       •       •         10       30       FXN 30K-2M       440,-       62       1       0       •       •         10       30       SFB 30K10HIPM       820,-       63       1       0       •       •         10       100       SFB 100K10HIP       790,-       63       1       •       •       •         10       100       SFB 100K-2XL       1290,-       63       1       •       •       •       •         10       150       SXS 100K-2       1570,-       64       1       •       •       •       •         10       150       SXS 100K-2       1920,-       64       2**       •													•	0
10       30       FXN 30K-2M       440,-       62       1       0       •       •         10       30       SFB 30K10HIPM       820,-       63       1       0       •			FFN 25K10IPM				0							•
10       30       SFB 30K10HIPM       820,-       63       1       0											•			0
0       100       SFB 100K10HIP       790,-       63       1       •								-					•	
100       100       SFB 100K-2XL       1290,-       63       1       • <td></td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td>0</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>						-	0				-			
0       150       SXS 100K-2       1570,-       64       1       •       •       •         0       150       SXS 100K-2L       1920,-       64       2**       • <td></td> <td>•</td>														•
0       150       SXS 100K-2L       1920,-       64       2**       •											-	-		
0       20       30       60       SXS 60K-2M       1130,-       64       1       0       •													•	0
0       20       30       60       SXS 60K-2LM       1370,-       64       1       0       •							0			-			•	0
0       60       SFB 60K-2XLM       1030,-       63       1       0	0   20			/	64	1		•	0	•			•	0
0       300       SXS 300K-2       1790,-       64       2**       •       •       •         0   50       60   150       SXS 100K-2M       1370,-       64       1       •	0	60	SFB 60K-2XLM	1030,-	63			٠			•			•
10       50       60       150       SXS 100K-2M       1370,-       64       1       0       • <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0</td> <td></td> <td></td> <td></td> <td>•</td> <td>•</td> <td></td> <td>•</td>							0				•	•		•
0       50       60       150       SXS 100K-2LM       1690,-       64       2**       0       0       0       0       0       150       SFB 100K-2HM       840,-       63       1       0<														0
0         150         SFB 100K-2HM         840,-         63         1         ○         ●														0
0 150 SFB 100K-2LM 1110,- 63 1 • • • • • • •												_	•	0
							-	-						
i0 150 SFB 100K-2XLM 1320 63 1 ○ ● ○ ● ● ●	i0 i0	150	SFB 100K-22LM SFB 100K-2XLM	1320,-	63	1	0		0	•				
0   100   150   300 SXS 300K-2M 1690,- 64 2** • • • •													•	0

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FGE 5K-3S05



FGE 10K-3S05



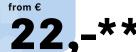






### The price breaker!

Most economical kitchen scale in the KERN assortment



\*\* Price/unit, excl. of VAT ex works, only available in a set of 5 units

Precise design kitchen scale for kitchen, cafeteria, gastronomy

### Features

- FGE 10K-3S05: Weighing plate made out of safety glass
- hygienic and easy to clean
- Low overall height for secure footing and space-saving storage
- Secure and non-slip positioning through
   rubber feet
- Very easy to use FGE 5K-3S05: 2 Buttons FGE 10K-3S05: 1 Button
- Comfortable taring with just one keystroke. For example, you can tare a bowl before starting a formulation. In addition, you can tare each time you weigh in a formulation ingredient, so that you can weigh in the next formulation ingredient with the weight indicated in the formula without having to do any calculations
- Integrated AUTO-OFF function to preserve the batteries
- I Large high-contrast display that is easy to read

### Technical data

### FGE 5K-3S05

- Large backlit LCD display, digit height 18 mm
- Overall dimensions W×D×H 152×230×15 mm
- Dimensions of glass weighing plate W×D 152×230 mm
- Ready for use: Batteries included, 2×CR2032

### FGE 10K-3S05

- Large backlit LED display, digit height 22 mm
- Overall dimensions W×D×H 272×250×22 mm
- Dimensions of glass weighing plate W×D 272×205 mm
- Ready for use: Batteries included, 3×1,5 V AAA
- Note: The models are delivered in a set of 5 units. i.e. the price given in the table refers to 5 items. Cannot be delivered individually. The calibration price refers to one single balance



Model	Weighing capacity	Readability	Price	Option			
			excl. of VAT	DAkkS Calibr. Ce	ertificate		
	[Max]	[d]	ex works	DAkkS			
KERN	kg	g	€	KERN	€		
FGE 5K-3S05	5	1	110,-*	963-127	82,-		
FGE 10K-3S05	15	1	160,-*	963-128	99,-		
	* Price set of 5 units						



# **07** Compact bench scale with multi-purpose functionality and a high level of accuracy for use in industry, gastronomy and kitchen

### Features

- · Simple and convenient 5-key operation
- Very fast display: steady weight values
- within 3 s
- Ideal as a
  - compact letter and parcel scale, especially in constricted spaces
  - grading or commissioning balance or simple checkweigher in production or dispatch
  - Checkweigher in the catering trade, cafeterias, school kitchens
- High mobility: thanks to battery operation/ rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations (production, warehouse, dispatch department etc.)

· Protective working cover included with delivery

### **Technical data**

- Large backlit LCD display, digit height 25 mm
- Dimensions weighing surface, stainless steel, W×D 253×228 mm
- Overall dimensions W×D×H 270×345×106 mm
- Optional battery operation, 9 V block not
- included in scope of delivery, operating time up to 20 h, AUTO-OFF function to preserve the battery
- Net weight approx. 2,8 kg
- Permissible ambient temperature 5 °C/35 °C

### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN FCF-A01S05, € 40,-
- Internal rechargeable battery pack, operating time up to 120 h without backlight, charging time approx. 16 h, KERN GAB-A04, € 40,-

STANDARD	STANDARD										
	<u>.</u>	<b>≜</b> ^	%	C	^-–	m	B				DAkkS
CAL EXT	PCS	RECIPE	PERCENT	UNIT	MOVE	BATT	MULTI	DMS	1 DAY	ACCU	+3 DAYS

Model	Weighing capacity	Readability	Reproducibility	Linearity	Smallest part	Price	Option	
						excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]			[Normal]	ex works	DAkkS	
KERN	kg	g	g	g	g/piece	€	KERN	€
FCF 3K-4	3	0,1	0,1	± 0,3	2	210,-	963-127	82,-
FCF 30K-3	30	1	1	± 3	20	210,-	963-128	99,-















07

Compact stainless steel bench scale with EC type approval [M] and special checkweighing display for even more efficient working

### Features

- Innovative weighing with tolerance range (Checkweighing): The colour of the display changes depending on the weight (too light/ ok/too heavy) and is an aid to help with portioning, dosing and grading
- Stainless steel design of the housing and weighing plate. Its smooth surfaces make it simple to clean
- Suitable for the ever-increasing hygienic requirements in the food industry
- High mobility: thanks to battery operation, compact, lightweight construction, it is suitable for the use in several locations (kitchen, sales office, cafeteria, Food industry-Laboratory etc.)
- Your support in a HACCP-compliant quality system
- Protection against dust and water splashes IP67 (only when using battery)

- Secure and non-slip positioning through rubber feet
- Increased protection against humidity through waterproof silicone sealing of the load cell, electronics and soldering joints
- Mains adapter included with the delivery
- · Protective working cover included with delivery

### **Technical data**

- Large backlit LCD display, digit height 25 mm
- Overall dimensions W×D×H 256×285×100 mm
- KERN FOB-LM: Optional battery operation, 4×1.5 V AA, standard, operating time up to 48 h, AUTO-OFF function to preserve the battery
- Net weight 3,8 kg
- Permissible ambient temperature 5 °C/35 °C

### Accessories

- S Protective working cover, scope of delivery: 5 items, KERN FOB-A13S05, € 40,-
- Mains adapter external, not included, can be reordered, KERN FOB-A01, € 35,-
- If are pan made from stainless steel, ideal for weighing loose small parts as well as fruit, vegetables, etc., KERN RFS-A02, € 65,-

**Note:** Official verification is mandatory for commerical trade.

STANDARD						OPTION	FACTORY
CAL EXT	<b>66</b>	BATT	230 V	DMS	1 DAY	DAkkS +3 days	H3 DAYS

Model	Weighing	Readability	Verification	Minimal load	Weighing plate	Price	Option			
	capacity		value			excl. of VAT	Verifica	Verification DAkkS Calibr. Certifi		rtificate
	[Max]	[d]	[e]	[Min]		ex works	MIII		DAkkS	
KERN	kg	g	g	g	mm	€	KERN	€	KERN	€
FOB 1K-4LM	1,5	0,5	0,5	10	248×198	285,-	965-227	55,-	963-127	82,-
FOB 3K-3LM	3	1	1	20	248×198	285,-	965-227	55,-	963-127	82,-
FOB 6K-3LM	6	2	2	40	248×198	285,-	965-228	70,-	963-128	99,-
FOB 10K-3LM	15	5	5	100	248×198	285,-	965-228	70,-	963-128	99,-
Note: F	or applications th	nat require verific	ation, please ord	ler verification at	the same time, i	nitial verificat	ion at a later	date is n	ot possible.	

Verification at the factory, we need to know the full address of the location of use.



Super compact stainless steel balance for weighing, checking and portioning in the smallest of spaces

	KERN FOB-S	KERN FOB-NS						
Features	<ul> <li>Stainless steel design of the housing and weighing plate. Its smooth surfaces make it simple to clean</li> <li>High mobility: thanks to battery operation, compact, lightweight construction, it is suitable for the use in several locations (kitchen, sales office, cafeteria, Food industry-Laboratory etc.)</li> <li>Secure and non-slip positioning through rubber feet</li> <li>Your support in a HACCP-compliant quality system</li> <li>Particularly flat design</li> <li>Protective working cover included with delivery</li> </ul>							
		<ul> <li>Protection against dust and water splashes IP65 (only when using battery)</li> </ul>						
	Large LCD display, digit height 20 mm     Permissible ambient temperature 10 °C/40 °C							
Technical data	<ul> <li>Dimensions weighing surface, stainless steel, W×D 125×155 mm</li> <li>Overall dimensions W×D×H 175×155×40 mm</li> <li>Ready for use: Batteries included, 9 V block, operating time up to 20 h</li> <li>Net weight approx. 0,70 kg</li> </ul>	<ul> <li>Dimensions weighing surface, stainless steel, W×D 150×120 mm</li> <li>Overall dimensions W×D×H 170×150×40 mm</li> <li>Ready for use: Batteries included, 9 V block, operating time up to 24 h</li> <li>Net weight 0,80 kg</li> </ul>						
Accessories	<ul> <li>Protective working cover, scope of delivery: 5 items, KERN FOB-A11S05, € 50,-</li> </ul>	<ul> <li>Protective working cover, scope of delivery: 5 items, KERN FOB-A12S05, € 40,-</li> </ul>						
	• External mains adapter, KERN FOB-A09, <b>€ 40,-</b>	·						



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Model	Weighing capacity	Readability	Weighing plate	Price	Options	
			W×D	excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]	ex works		DAkkS	
KERN	kg	g	mm	€	KERN	€
FOB 500-1S	0,5	0,1	155×125	85,-	963-127	82,-
FOB 5K1S	5	1	155×125	85,-	963-127	82,-
FOB 0.5K-4NS	0,5	0,1	150×120	110,-	963-127	82,-
FOB 5K-3NS	5	1	150×120	110,-	963-127	82,-



Compact stainless steel bench (FOB) scale with special checkweighing display for even more efficient working

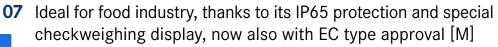
	KERN FOB	KERN FOB-NL						
	<ul> <li>Stainless steel design of the housing and weighing plate. Its smooth surfaces make it simple to clean</li> <li>High mobility: thanks to battery operation, compact, lightweight construction, it is suitable for the use in several locations (kitchen, sales office, cafeteria, Food industry-Laboratory etc.)</li> <li>Your support in a HACCP-compliant quality system</li> <li>Protective working cover included with delivery</li> </ul>							
Features	<ul> <li>Innovative weighing with tolerance range (Checkweighing): The colour of the display changes depending on the weight (too light/ok/too heavy) and is an aid to help with portioning, dosing and grading</li> <li>Secure and non-slip positioning through rubber feet</li> <li>Increased protection against humidity through waterproof silicone sealing of the load cell, electronics and soldering joints</li> </ul>	<ul> <li>Ideal for the increased hygienic requirements in the food industries</li> <li>Protection against dust and water spashes IP67 (only when using battery)</li> </ul>						
Technical data	<ul> <li>Large backlit LCD display, digit height 20 mm</li> <li>Overall dimensions W×D×H 240×180×60 mm</li> <li>Net weight approx. 2,0 kg</li> </ul>	<ul> <li>Large backlit LCD display, digit height 25 mm</li> <li>Overall dimensions W×D×H 285×255×90 mm</li> <li>Ready for use: Batteries included, 4×1.5 V AA, operating time up to 48 h</li> <li>Net weight approx. 3,8 kg</li> </ul>						
	Permissible ambient temperature 5 °C/35 °C							
Accessories	<ul> <li>Protective working cover, scope of delivery: 5 items, KERN FOB-A05S05, € 40,-</li> <li>Internal rechargable battery pack, operating time up to 24 h without backlight, charging time approx. 8 h, KERN FOB-A07, € 50,-</li> </ul>	<ul> <li>Protective working cover, scope of delivery: 5 items, KERN FOB-A13S05, € 40,-</li> <li>Mains adapter external, not included, KERN FOB-A01, € 40,-</li> </ul>						
	• Tare pan made from stainless steel, Ideal for weighing loose sm	nall parts as well as fruit, vegetables, etc., KERN RFS-A02, € 65,-						

STANDARD     OPTION     STANDARD     OPTION       Image: Calext     Image: Calext									
Model	Weighing capacity	Readability	Weighing plate	Price	Option				
		-		excl. of VAT	DAkkS Calibr. Ce	rtificate			
	[Max]	[d]		ex works	DAkkS				
KERN	kg	g	mm	€	KERN	€			
FOB 1.5K0.5	1,5	0,5	175×165	195,-	963-127	82,-			
FOB 3K1	3	1	175×165	195,-	963-127	82,-			
FOB 6K2	6	2	175×165	195,-	963-128	99,-			
FOB 3K-4NL	3	0,2	252×200	285,-	963-127	82,-			
	Dual-range balance switch	nes automatically to the next larges	st weighing capacity [Max] and read	ibility [d]					
FOB 7K-4NL	5   7,5	0,5   1	252×200	245,-	963-128	99,-			
FOB 10K-3NL	8   15	1   2	252×200	245,-	963-128	99,-			
FOB 30K-3NL	16   30	2   5	252×200	245,-	963-128	99,-			

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### Features

- Suitable for the ever-increasing hygienic requirements in the food industry
- Your support in a HACCP-compliant quality system
- IP Protection against dust and water splashes IP65 (only when using rechargeable battery pack)
- Very fast display: steady weight values within 2 s
- 2 Second display on the rear of the balance
- Compact size, practical for small spaces
- Innovative weighing with tolerance range (Checkweighing): The colour of the display changes depending on the weight (too light/ ok/too heavy) and is an aid to help with portioning, dosing and grading

- High mobility: thanks to rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations
- Recessed grips on the underside of the scale for easy transportation
- Protective working cover included with delivery

### **Technical data**

- Large backlit LCD display, digit height 25 mm
- Weighing plate dimensions, stainless steel, W×D 260×200 mm
- Overall dimensions W×D×H 285×315×128 mm
- Net weight approx. 3,2 kg
- Permissible ambient temperature -10 °C/40 °C







### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN RFB-A01S05, € 40,-
- Internal rechargeable battery pack, operating time up to 50 h without backlight, charging time approx. 12 h, KERN WTB-A01N, € 35,-
- I Tare pan made from stainless steel, ideal for weighing loose small parts as well as fruit, vegetables, etc 370×240×20 mm, KERN RFS-A02, € 65,-

STANDARD			OPTION	FACTORY			
CAL EXT	000 IP 65	B MULTI	DMS	1 DAY	ACCU	DAkkS +3 days	+3 DAYS

_										
Model	Weighing capacity	Readability	Verification value	Minimal load	Price		Option			
					excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	. Certificate	
	[Max]	[d]	[e]	[Min]	ex works	MIII		DAkkS		
KERN	kg	g	g	g	€	KERN	€	KERN	€	
WTB 1K-4N	1,5	0,2	-	-	250,-	-	-	963-127	82,-	
WTB 3K-4N	3	0,5	-	-	250,-	-	-	963-127	82,-	
WTB 6K-3N	6	1	-	-	250,-	-	-	963-128	99,-	
WTB 10K-3N	15	2	-	-	250,-	-	-	963-128	99,-	
WTB 30K-3N	30	5	-	-	250,-	-	-	963-128	99,-	
Note: F	or applications that r	equire verification, pl	ease order verificatio	n at the same time,	initial verificat	ion at a later	date is r	not possible.		
	١	/erification at the fac	tory, we need to know	w the full address of	the location o	f use.				
WTB 1K-4NM	1,5	0,5	0,5	10	265,-	965-227	55,-	963-127	82,-	
WTB 3K-3NM	3	1	1	20	265,-	965-227	55,-	963-127	82,-	
WTB 6K-3NM	6	2	2	40	265,-	965-228	70,-	963-128	99,-	
WTB 10K-3NM	15	5	5	100	265,-	965-228	70,-	963-128	99,-	
WTB 30K-2NM	30	10	10	200	265	965-228	70	963-128	99	









# All-round bench scale, protected by stainless steel and IP65 rating, also with EC type approval [M]

### Features

- II Ideal for the ever-increasing hygienic requirements in the food, pharmaceutical and chemical industries
- Your support in a HACCP-compliant quality system
- Ideal for the robust industrial applications
- I Protection against dust and water splashes IP65 (only when using rechargeable battery pack
- High mobility: thanks to rechargeable battery operation, compact, lightweight construction, it is suitable for the use in several locations (kitchen, sales office, cafeteria, Food industry-Laboratory etc.)
- Stainless steel design of the housing and weighing plate. Its smooth surfaces make it simple to clean
- Recessed grips on the underside of the scale for easy transportation

STANDARD							OPTION	FACTORY
	$\mathcal{C}$	666		вЩ			DAkkS	Μ
CAL EXT	UNIT	IP 65	ACCU	MULTI	DMS	1 DAY	+3 DAYS	+3 DAYS

3										
Model	Weighing capacity	Readability	Verification value	Minimal load	Price		Option			
					excl. of VAT	Verifica	tion	DAkkS Calibr. Certificate		
	[Max]	[d]	[e]	[Min]	ex works	MIII		DAkkS		
KERN	kg	g	g	g	€	KERN	€	KERN	€	
FFN 1K-4N	1,5	0,2	-	-	300,-	-	-	963-127	82,-	
FFN 3K0.5IPN	3	0,5	-	-	295,-	-	-	963-127	82,-	
FFN 6K1IPN	6	1	-	-	295,-	-	-	963-128	99,-	
FFN 15K2IPN	15	2	-	-	295,-	-	-	963-128	99,-	
FFN 25K5IPN	25	5	-	-	295,-	-	-	963-128	99,-	
Note: F	or applications that r	equire verification, pl	ease order verificatio	n at the same time, i	nitial verificat	ion at a later	date is r	ot possible.		
	١	Verification at the fac	tory, we need to know	w the full address of	the location o	f use.				
FFN 1K-4NM	1,5	0,5	0,5	10	310,-	965-227	55,-	963-127	82,-	
FFN 3K1IPM	3	1	1	20	310,-	965-227	55,-	963-127	82,-	
FFN 6K2IPM	6	2	2	40	310,-	965-228	70,-	963-128	99,-	
FFN 15K5IPM	15	5	5	100	310,-	965-228	70,-	963-128	99,-	

200

310,

10

10

### **Technical data**

- Large backlit LCD display, digit height 25 mm
- Dimensions weighing surface, stainless steel, W×D 230×190 mm
- Overall dimensions W×D×H 230×300×130 mm
- Internal rechargeable battery pack, operating time up to 50 h without backlight, charging time approx. 12 h
- Net weight approx. 4,0 kg
- Permissible ambient temperature KERN FFN-N: 0 °C/40 °C KERN FFN-NM: -10 °C/40 °C

- Tare pan mag
  - Tare pan made from stainless steel. Ideal for weighing loose small parts as well as fruit, vegetables, etc., KERN RFS-A02, € 65,-

FFN 25K10IPM

25

70,

963-128

99,-

965-228



# Robust, space-saving bench scale, protected by stainless steel and IP68 rating

### Features

STANDARD

Γ1

07

- Suitable for the ever-increasing hygienic requirements in the food industry
- Your support in a HACCP-compliant quality system
- Ideal for the robust industrial applications
- Very high class of protection against dust and water IP68, ideal for harsh ambient conditions. Submersion in water actually possible
- Particularly suitable to determine the specific weight of organs, tissues, etc. in Pathology or in the laboratory
- Stainless steel design of the housing and weighing plate. Its smooth surfaces make it simple to clean
- Very fast display: steady weight values within 2 s
- High mobility: thanks to battery operation, compact, lightweight construction, it is suitable for the use in several locations
- **II** Recessed grips on the underside of the scale for easy transportation

Э)

666

IP 68

**III**)

BATT

DMS

S

CALEXT PCS UNIT TOL

 Weighing with tolerance range (checkweighing): a visual and audible signal helps with portioning, dispensing or grading

### **Technical data**

- Large backlit LCD display, (FXN-M: green) digit height 25 mm
- Dimensions weighing surface, stainless steel, W×D 236×195 mm
- Overall dimensions W×D×H 240×280×120 mm
- Ready for use: Batteries included, 4×1.5 V Size D, Operating time without backlight FXN-N up to 200 h, FXN-M 500 h, AUTO-OFF function to preserve the battery
- Net weight 3,2 kg

FACTORY

Μ

+3 DAYS

OPTION

DAkk

+3 DAY

Permissible ambient temperature -10 °C/40 °C

### Accessories

 I Tare pan made from stainless steel. Ideal for weighing loose small parts as well as fruit, vegetables, etc. W×D×H 370×240×20 mm, KERN RFS-A02, € 65,-

**Note:** Official verification is mandatory for commerical trade.

Model	Weighing	Readability	Verification	Minimal load	Smallest part	Price	Option			
	capacity		value		weight	excl. of VAT	Verifica	Verification DAkkS Calibr. Certific		
	[Max]	[d]	[e]	[Min]	[Normal]	ex works	MIII		DAkkS	
KERN	kg	g	g	g	g/piece	€	KERN	€	KERN	€
FXN 3K-4N	3	0,5	-	-	5	400,-	-	-	963-127	82,-
FXN 6K-3N	6	1	-	-	10	400,-	-	-	963-128	99,-
FXN 10K-3N	15	2	-	-	20	400,-	-	-	963-128	99,-
FXN 30K-3N	<b>(N 30K-3N</b> 30 5 – – 50 <b>400,</b> – – 963-128									
Note: F	Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible.									
		Verification a	t the factory, we	need to know th	e full address of	the location of	f use.			

	Verification at the factory, we need to know the full address of the location of use.									
FXN 3K-3M	3	1	1	20	5	440,-	965-227	55,-	963-127	82,-
FXN 6K-3M	6	2	2	40	10	440,-	965-228	70,-	963-128	99,-
FXN 10K-3M	15	5	5	100	20	440,-	965-228	70,-	963-128	99,-
FXN 30K-2M	30	10	10	200	50	440,-	965-228	70,-	963-128	99,-







Stainless steel platform scales with IP65/67 protection, also with XL platform or EC type approval [M]

### Features

- Ideal for the robust industrial applications
- Platform: made entirely of stainless steel, silicone-coated Stainless Steel load cell, protection against dust and water splashes IP67
- Display device: Stainless steel, protection against dust and water splashes IP65, (only when using rechargeable battery pack)
- IS SFB-H: Column, standard, for models with weighing plate size

300×240 mm: Height of stand approx. 200 mm 400×300 mm: Height of stand approx. 400 mm

### Technical data

- Large backlit LCD display, digit height 52 mm
- Dimensions of display device W×D×H 266×165×96 mm
- Cable length of display device approx. 3 m
- Internal rechargeable battery pack, operating time up to 35 h without backlight, charging time approx. 12 h
- Permissible ambient temperature -10 °C/40 °C

### Accessories

• Data interface RS-232, interface cable included, approx. 1,5 m, must be ordered at purchase, RS 232 data interface including interface cable, KERN KFN-A01, € 95,-

07

- Stand to be screwed onto the platform, height of stand approx. 600 mm, KERN SFB-A01, € 95,-
- If a stand to elevate display device, height of stand approx. 800 mm, KERN BFS-A07, € 140,-
- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, not possible in combination with RS 232 data interface or verification, KERN KFB-A03, € 135,-
- Further details, plenty of further accessories and suitable printers see Accessories

STANDARD	OPTION	FACTORY	. '
Image: Superior of the superior	ET DAkkS	RS 232	

Model	Weighing	Readability	Verification	Minimal load	Net weight	Weighing	Price		(	Option	
	capacity		value			plate	excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	ertificate
	[Max]	[d]	[e]	[Min]	approx.	W×D	ex works	MIII		DAkkS	
KERN	kg	g	g	g	kg		€	KERN	€	KERN	€
SFB 50K-3XL	50	5	-	-	14	500×400	890,-	-	-	963-128	99,-
SFB 100K-2XL	100	10	-	-	24	650×500	1290,-	-	-	963-129	122,-
				with	elevated displ	ау					
SFB 10K1HIP	10	1	-	-	8	300×240	790,-	-	-	963-128	99,-
SFB 20K2HIP	20	2	-	-	8	300×240	790,-	-	-	963-128	99,-
SFB 50K5HIP	50	5	-	-	8	300×240	790,-	-	-	963-128	99,-
SFB 50K5LHIP	50	5	-	-	10	400×300	760,-	-	-	963-128	99,-
SFB 100K10HIP	100	10	-	-	10	400×300	790,-	-	-	963-129	122,-
Note: F	or application	s that require	verification, pl	ease order ver	rification at the	e same time, i	initial verificat	ion at a later	date is r	not possible.	
		Verifica	tion at the fac	tory, we need	to know the fu	all address of	the location o	f use.			
SFB 60K-2XLM	60	20	20	400	14	500×400	1030,-	965-229	93,-	963-129	122,-
SFB 100K-2LM	150	50	50	1000	14	500×400	1110,-	965-229	93,-	963-129	122,-
SFB 100K-2XLM	150	50	50	1000	24	650×500	1320,-	965-229	93,-	963-129	122,-
				with	elevated displ	ау					
SFB 15K5HIPM	15	5	5	100	8	300×240	810,-	965-228	70,-	963-128	99,-
SFB 30K10HIPM	30	10	10	200	8	300×240	820,-	965-228	70,-	963-128	99,-
SFB 60K20LHIPM	60	20	20	400	10	400×300	810,-	965-229	93,-	963-129	122,-
SFB 100K-2HM	150	50	50	1000	10	400×300	840,-	965-229	93,-	963-129	122,-





High-quality stainless steel platform scale with stainless steel IP68 display device – now also as high resolution version with high-resolution display



Piece counting



Recipe-weighing



Thanks to the stainless steel design of the evaluation unit and platform with smooth surface – the scale is rust-free and easy to clean

07

### Stainless steel platform scale KERN SXS



### Features

- Ideal for the robust industrial applications
- II Platform: made entirely of stainless steel, hermetically welded stainless steel load cell, dust and spray protection to IP68. Substruction in wing design, extremely resistant to bending. Earthed weighing plate, to reduce static charge
- Display device: Stainless steel, protection against dust and water splashes IP68, integrated power supply
- Suitable for the ever-increasing hygienic requirements in the food industry
- Wall mount for display device, standard
- Superior display size: digit height 55 mm, bright backlight for easy reading of weighing results, even in poor lighting conditions
- Easy-to use KERN menu structure with printout of weighing results which can be intuitively adapted
- Thanks to interfaces such as RS-232, RS-485 and Bluetooth (optional) the scale can easily be connected to existing networks and facilitates the data exchange between the scale and printer



### Technical data

- Large backlit LCD display, digit height 55 mm
- Weighing plate dimensions, stainless steel
- W×D×H
- 300×240×86 mm, see larger picture
- B 400×300×89 mm
- **500×400×123 mm**
- 650×500×133,5 mm
- Dimensions of display device W×D×H
  232×170×80 mm
- Cable length of display device approx. 2,5 m



### Accessories

 Istand to elevate display device, for models with weighing plate size
 Image: Ima

III Height of stand approx. 400 mm, KERN IXS-A03, € 85,-

**⊡**-**D** Height of stand approx. 600 mm, KERN IXS-A04, € 105,-

- Internal rechargeable battery pack, operating time up to 80 h without backlight, charging time approx. 12 h, must be ordered at purchase, KERN GAB-A04, € 40,-
- Data interface RS-232, interface cable included, approx. 1,5 m, must be ordered at purchase, KERN KXS-A04, € 100,-
- Data interface RS-485, must be ordered at purchase, KERN KXS-A01, € 145,-
- Foot switch, must be ordered at purchase, KERN KXS-A03, € 130,-
- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, not in combination with verification, KERN KXS-A02, € 170,-
- Further details, plenty of further accessories and suitable printers see *accessories*

STANDARD										OPTION		FACTORY				
Ĩ.	GLP	<u>.</u>		^-–	666				<b></b> )	1	DAkkS		• 688. •	*		Μ
CAL EXT	PRINTER	PCS	TOL	MOVE	IP 68	230 V	DMS	1 DAY	2 DAYS	ET	+3 DAYS	RS 232	RS 485	BT	ACCU	+3 DAYS
									D			*	*			

Model	Weighing	Readability	Verification	Minimal load	Linearity	Weighing	Price		(	Option	
	capacity		value			plate	excl. of VAT	Verifica	tion	DAkkS Calibr. C	ertificate
	[Max]	[d]	[e]	[Min]			ex works	MIII		DAkkS	
KERN	kg	g	g	g	g		€	KERN	€	KERN	€
				High res	solution reada	bility					
SXS 6K-3 🔤	6	0,5	-	-	± 1,5	A	1030,-	-	-	963-128	99,-
SXS 10K-3 🛛 🔤	15	1	-	-	± 3	A	1030,-	-	-	963-128	99,-
SXS 10K-3L 🛛 🔤	15	1	-	-	± 3	В	1290,-	-	-	963-128	99,-
SXS 30K-2 🔤	30	2	-	-	± 6	В	1290,-	-	-	963-128	99,-
SXS 30K-2L 🛛 🔤	30	2	-	-	± 6	С	1580,-	-	-	963-128	99,-
SXS 60K-2 🔤	60	5	-	-	± 15	В	1310,-	-	-	963-129	122,-
SXS 60K-2L 🛛 🔤	60	5	-	-	± 15	С	1580,-	-	-	963-129	122,-
SXS 100K-2 🛛 🔤	150	10	-	-	± 30	С	1570,-	-	-	963-129	122,-
SXS 100K-2L	150	10	-	-	± 30	D	1920,-	-	-	963-129	122,-
SXS 300K-2 🛛 🔤	300	20	-	-	± 60	D	1790,-	-	-	963-129	122,-
	Dual	-range balance	e switches aut	omatically to t	he next larges	st weighing ca	pacity [Max] a	nd readibility	y [d]		
SXS 6K-3M	3   6	1   2	1   2	20   40	± 1   2	A	870,-	965-228	70,-	963-128	99,-
SXS 10K-3M	6   15	2   5	2   5	40   100	±2 5	A	870,-	965-228	70,-	963-128	99,-
SXS 10K-3LM	6   15	2   5	2   5	40   100	±2 5	В	1120,-	965-228	70,-	963-128	99,-
SXS 30K-2M	15   30	5   10	5   10	100   200	±5 10	В	1120,-	965-228	70,-	963-128	99,-
SXS 30K-2LM	15   30	5   10	5   10	100   200	±5 10	С	1370,-	965-228	70,-	963-128	99,-
SXS 60K-2M	30   60	10   20	10   20	200   400	± 10   20	В	1130,-	965-229	93,-	963-129	122,-
SXS 60K-2LM	30   60	10   20	10   20	200   400	± 10   20	C	1370,-	965-229	93,-	963-129	122,-
SXS 100K-2M	60   150	20   50	20   50	400   1000	± 20   50	С	1370,-	965-229	93,-	963-129	122,-
SXS 100K-2LM	60   150	20   50	20   50	400   1000	± 20   50	D	1690,-	965-229	93,-	963-129	122,-
SXS 300K-2M	150   300	50   100	50   100	1000   2000	± 50   100	D	1690,-	965-229	93,-	963-129	122,-
Note: F	or application	s that require	verification, pl	ease order ver	ification at the	e same time, i	nitial verificat	ion at a later	date is r	not possible.	

Verification at the factory, we need to know the full address of the location of use.

\* Either RS-232 or RS-485 can be installed and used

New model

# KERN RFE Page 69

- > Large LCD display with four displays
- > TARE value display
- > Calculation of change
- > Stand to elevate display device
- Mains operation and rechargeable battery pack (optional)
- > Practical second display on the back of the balance

# <complex-block>

# **Price computing scales**

Price computing scales are used wherever the price of goods is calculated dependent on the weight of the goods. These scales are subject to obligatory verification (► *Verification*) in accordance with European Directive 2014/31/EU. Usually, these are verification class IMID scales

KERN mobile retail scales are compact in size and therefore save space on the sales counter. Thanks to the simple menu structure they are easy to use – saving time and money. Fitted with mains or rechargeable batteries as standard, price computing scales can be used in retail shops as well as on mobile sales stalls. All price computing scales from KERN have three displays showing you all important information at a glance:

- Weight display in kg (verifiable)
- Unit price in €/kg or €/100 g
- Total price in €

**NOTE:** The KERN RFE range also displays the TARE or PRE-TARE value, which enables this value to be stored in a legally binding way in accordance with the Weights and Measures Act.

Even the KERN entry level retail scales have direct access keys for memories (► **PLU**), The sales item with the relevant price can be stored against these PLU. In this way, frequently used sales items can called up at lightning speed. This accelerates customer service and reduces waiting times.

▶ See the glossary on page 215–217

Readability [d]	Weighing capacity [Max]	Model	Price excl. of VAT ex works	Page	DAYS	Μ	CAL EXT	RS 232	MEMORY	ACCU
g	kg	KERN	€			For an expl	anation on t	he pictos, s	ee front flap	
0,5   1	1,5   3	RPB 3K3DM	225,-	68	1	0	۲	•	•	0
0,5   1	1,5   3	RPB 3K3DHM	245,-	68	1	0	•	•	•	0
1   2	3   6	RIB 6K-3M	230,-	67	1	0	٠		٠	0
1   2	3   6	RIB 6K-3HM	265,-	67	1	0	•		•	0
1   2	3   6	RPB 6K1DM	225,-	68	1	0	•	•	•	0
1   2	3   6	RPB 6K1DHM	245,-	68	1	0	•	•	•	0
1   2	3   6	RFE 6K3M	320,-	69	1	0	•	•	•	0
2   5	6   15	RIB 10K-3M	230,-	67	1	0	•		•	0
2   5	6   15	RIB 10K-3HM	265,-	67	1	0	•		•	0
2   5	6   15	RPB 15K2DM	225,-	68	1	0	•	•	•	0
2   5	6   15	RPB 15K2DHM	245,-	68	1	0	•	•	•	0
2   5	6   15	RFE 15K3M	320,-	69	1	0	•	•	•	0
5   10	15   30	RIB 30K-2M	230,-	67	1	0	•		•	0
5   10	15   30	RIB 30K-2HM	265,-	67	1	0	•		•	0
5   10	15   30	RPB 30K5DM	225,-	68	1	0	•	•	•	0
5 10	15   30	RPB 30K5DHM	245,-	68	1	0	•	•	•	0
5   10	15   30	RFE 30K3M	320,-	69	1	0	•			

### **Quick-Finder Price computing scales**

News 2022

• = standard O = option









# Robust retail scale with large item memory, user-friendly handling and EC type approval [M]

### Features

- KERN RIB-HM: Elevated display backlit, height of stand approx. 530 mm, must be ordered at purchase
- 🛛 KERN RIB-M: Second display on the rear of the balance
- Three displays for weight display (verifiable), unit price, total price
- Soil-resistant construction through water channels at the frame of the housing and sealing rings over the upper housing inlets
- 10 Direct price keys for frequently recurring article prices
- Memory (PLU) for 20 article prices
- Energy management: Backlight turns off after 5 s, can be switched off
- · Protective working cover included with delivery

### **Technical data**

- Large backlit LCD displays, digit height
   18 mm
- Dimensions weighing surface, stainless steel, W×D 294×225 mm
- Overall dimensions W×D×H KERN RIB-M: 325×400×115 mm KERN RIB-HM: 325×340×405 mm
- Net weight KERN RIB-M: approx. 3,2 kg KERN RIB-HM: approx. 3,8 kg
- Permissible ambient temperature -10 °C/40 °C

### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN RIB-A01S05, € 40,-
- Internal rechargeable battery pack, operating time up to 80 h without backlight, charging time approx. 14 h, KERN GAB-A04, € 40,-
- Is Tare pan made of stainless steel, ideal for weighing loose small parts as well as fruit, vegetables etc., W×D×H 370×240×20 mm, KERN RFS-A02, € 65,-

### **Application examples**

- retail shops
- weekly markets
- farm shops
- pick your own fruit and vegetable sales

**Note:** Official verification is mandatory for commerical trade.

STANDARD	 	OPTION	FACTORY
CAL EXT	230 V 1 DAY	ACCU DAkkS	H3 DAYS

Model	Weighing capacity	Readability	Verification value	Minimal load	Price		(	Option		
					excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	rtificate	
	[Max]	[d]	[e]	[Min]	ex works	MUD		DAkkS		
KERN	kg	g	g	g	€	KERN	€	KERN	€	
	Dual-range	balance switches aut	omatically to the nex	t largest weighing ca	pacity [Max] a	nd readibility	y [d]			
RIB 6K-3M	3   6	1   2	1   2	20   40	230,-	965-228	70,-	963-128	99,-	
RIB 10K-3M	6   15	2   5	2   5	40   100	230,-	965-228	70,-	963-128	99,-	
RIB 30K-2M	15   30	5   10	5   10	100   200	230,-	965-228	70,-	963-128	99,-	
			with elevate	ed display						
RIB 6K-3HM	3   6	1   2	1   2	20   40	265,-	965-228	70,-	963-128	99,-	
RIB 10K-3HM	6   15	2   5	2   5	40   100	265,-	965-228	70,-	963-128	99,-	
RIB 30K-2HM	15   30	5   10	5   10	100   200	265,-	965-228	70,-	963-128	99,-	
Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible.										
Verification at the factory, we need to know the full address of the location of use.										

www.kern-sohn.com · Order hotline +49 7433 9933-0



### Retail scale with memories for item prices – now with Checkout-Dialogue 06

### 08 Features

- Modern, ergonomic design and a housing which is even more compact, supporting efficient operation and saving space
- II KERN RPB-HM: Elevated display backlit, revolving on column, height of stand approx.
   480 mm, must be ordered at purchase
- 🛛 KERN RPB-M: Second display on the rear of the balance
- Three displays for weight display (verifiable), unit price, total price
- Memory (PLU) for 10 article prices
- Unit price can be switched from €/kg to €/100 g
- Auto-clear-key: Unit price entry is automatically set to zero when scale is unloaded

- If High mobility: thanks to rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations
- · Protective working cover included with delivery

### Technical data

- Large backlit LCD displays, digit height 15 mm
- Dimensions weighing surface, stainless steel, W×D 204×263 mm
- Overall dimensions W×D×H RPB-M: 263×313×108 mm RPB-HM: 263×313×480 mm
- Net weight KERN RPB-M: approx. 2,8 kg KERN RPB-HM: approx. 3,2 kg
- Permissible ambient temperature -10 °C/40 °C









New: Checkout Dialog 06 – This dialog describes the communication procedure between a checkout scale in customer traffic and a freely programmable POS system, consisting of POS hardware and software. The aim of the Checkout Dialog 06 is to make manipulation of the data streams by third parties in principle impossible in freely programmable POS systems. Note: Other protocols on request.

### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN RFC-A02S05, € 40,-
- Internal rechargeable battery pack, operating time up to 50 h without backlight, charging time approx. 12 h,
   KEPN WTR A01N € 25 -
  - KERN WTB-A01N, **€ 35,-**
- Tare pan made of stainless steel, ideal for weighing loose small parts as well as fruit, vegetables etc., W×D×H 370×240×20 mm, KERN RFS-A02, € 65,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

### **Application examples**

- retail shops
  - weekly markets
  - farm shops
  - pick your own fruit and vegetable sales

**Note:** Official verification is mandatory for commerical trade.

STANDARD						OPTION		FACTORY
CAL EXT	• 600 • RS 232		A H MULTI	DMS	1 DAY	ACCU	DAkkS +3 DAYS	H3 DAYS

Model	Weighing capacity	Readability	Verification value	Minimal load	Price		(	Option	
					excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	rtificate
	[Max]	[d]	[e]	[Min]	ex works	MIII		DAkkS	
KERN	kg	g	g	g	€	KERN	€	KERN	€
	Dual-range	balance switches aut	omatically to the nex	t largest weighing ca	pacity [Max] a	nd readibility	/ [d]		
RPB 3K3DM 🔤	1,5   3	0,5   1	0,5   1	10	225,-	965-227	55,-	963-127	82,-
RPB 6K1DM	3   6	1   2	1   2	20	225,-	965-228	70,-	963-128	99,-
RPB 15K2DM	6   15	2   5	2   5	40	225,-	965-228	70,-	963-128	99,-
RPB 30K5DM	15   30	5   10	5   10	100	225,-	965-228	70,-	963-128	99,-
			with elevate	d display					
RPB 3K3DHM	1,5   3	0,5   1	0,5   1	10	245,-	965-227	55,-	963-127	82,-
RPB 6K1DHM	3   6	1   2	1   2	20	245,-	965-228	70,-	963-128	99,-
RPB 15K2DHM	6   15	2   5	2   5	40	245,-	965-228	70,-	963-128	99,-
RPB 30K5DHM	15   30	5   10	5   10	100	245,-	965-228	70,-	963-128	99,-
Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible.									

Verification at the factory, we need to know the full address of the location of use.







### Compact portion scale with 2 XXL displays – weight, unit price, total price and TARE value at a glance

### Features

STANDARD

CAL EXT

- · Ideal as a salad scale, sweet scale, checkweigher, portion scale or zero-waste scale: Shopping without plastic or packaging waste in packaging-free supermarkets
- · Large LCD display with four displays for weight display (verifiable), unit price, total price and stored TARE or PRE-TARE value
- TARE value display: this shows a TARE or PRE-TARE value stored in a PLU, which enables this value to be stored in a legally binding way in accordance with the Weights and Measures Act
- **1** Second display on the rear of the balance
- I Column to elevate the display as standard, can be easily fitted or removed by the user. The power cable for the second display can be stored in the folding column which is hygienic and gives a tidy appearance. Column height approx. 395 mm
- I Thanks to easily-understandable, universal symbols e.g. for weight, piece weight, total price this balance can also be understood and operated easily all over the world

UNIT

RS 232

- 4 Direct price keys for frequently recurring article prices
- Memory (PLU) for 100 article prices
- · Article description can be entered, displayed and printed in plain text
- · Unit price can be switched from EUR/kg to EUR/100 g
- Auto-clear-key: Unit price entry is automatically set to zero when scale is unloaded
- 3 Headers and footers of the printout can be programmed directly on the balance
- · High mobility: thanks to rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations
- · Recessed grips on the underside of the scale for easy transportation

### **Technical data**

ACCU

DAkk

+3 DAYS

- · Large backlit LCD display, digit height 20 mm
- Dimensions weighing surface, stainless steel, W×D 230×300 mm
- Overall dimensions W×D×H 320×450×130 mm
- Net weight approx. 4,2 kg

М

 Permissible ambient temperature -10 °C/40 °C OPTION FACTORY

### Accessories

 Label printer for printing weights on thermal labels, ASCII-capable, for further details, see Accessories, KERN YKE-01, € 620,-

80

· Rechargeable battery pack internal, operating time up to 60 h with backlight, charging time approx. 12 h, KERN GAB-A04, € 40,-

### **Application examples**

- · cafeterias, restaurants, Motorway service stations
- retail shops
  - weekly markets
  - farm shops
  - · pick your own fruit and vegetable sales

Note: Official verification is mandatory for commerical trade.

Model	Weighing capacity	Readability	Verification value	Minimal load	Price		(	Option		
					excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	rtificate	
	[Max]	[d]	[e]	[Min]	ex works	MIII		DAkkS		
KERN	kg	g	g	g	€	KERN	€	KERN	€	
	Dual-range balance switches automatically to the next largest weighing capacity [Max] and readibility [d]									
RFE 6K3M	3   6	1   2	1   2	20	320,-	965-228	70,-	963-128	99,-	
RFE 15K3M	6   15	2   5	2   5	40	320,-	965-228	70,-	963-128	99,-	
RFE 30K3M         15   30         5   10         5   10         100 <b>320,-</b> 965-228         70,-         963-128         99,-										
Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible.										

Verification at the factory, we need to know the full address of the location of use.

# KERN CCA Page 80

> High-resolution counting system with EC type approval

- > Maximum number of countable parts is 999,999
- > High-precision reference scale
- > Robust quantity scale
- > Both scales can be used individually

# **Counting scales/Counting systems**

from €

940.-

### Interesting facts about counting

### Smallest part weight for piece counting

This is the smallest piece weight the scale will accept for piece counting and will display it piece by piece. In practice, depending on the required accuracy, we recommend to choose a counting scale with a minimum piece weight smaller than the weight of the item to be counted. To make it easier for you to select the right model, we specify the smallest part weight when counting under laboratory conditions and normal conditions, see the website.

### Counting resolution

Describes the maximum quantity which can be counted with a counting accuracy of 1 %, with a minimum variation of item weights and a sufficiently large  $\blacktriangleright$  *reference quantity* (20 pieces with counting resolution  $\le 60,000$  points, 50 pieces from 60,000-150,000 points, 100 pieces  $\ge 150,000$  points). This therefore is an indication of the quality of the counting scale.

### Recommended ► reference quantity

Weight tolerances of pieces to be counted are the most significant sources of error when counting. Therefore, at the start of every counting procedure, establish an average weight, the so-called ► *reference weight*, by placing several pieces on the balance, the so-called reference quantity. Usually this would be:

5	pieces	>>	often sufficient
10	pieces	>>	common practise
20-100	pieces	>>	for large deviations among
			piece weights

The "automatic ► reference optimisation" function increases the reference quantity gradually, whereby the average piece weight is optimised step by step. This contributes considerably to the accuracy of the subsequent counting processes.

### Which counting scale for which application?

### Simple counting scale

with self-explanatory user guidance on the keyboard. The graphic control panel enables you to start working immediately, without having to consult the user manual. Easy handling, value for money.

### **Professional counting scale**

with 3 separate displays for reference weight (average weight of the pieces), total weight of all pieces and total quantity of all pieces. Very useful integrated memories, e.g. for container weight, item number, reference weight as well as audible and visual counting aids and an alphanumeric key pad for easy data entry.

### Special tip for counting large quantities: Counting systems

The weighing capacities of bench counting scales are often not sufficient to count large quantities, units, palletized items, etc. Here high-performance counting systems come into operation, as these combine a high-precision reference scale with a high-capacity bulk scale.

### See the glossary on page 215–217

# **Quick-Finder Counting scales/Counting systems**

Readability	Weighing	Counting	Model	Price	Page		N/L	-			□↔□		
[d]	capacity	resolution		excl. of VAT ex works	-00	DAYS	Μ	CAL EXT	MEMORY	RS 232	DUAL	ACCU	
la] g	[Max] kg	Points	KERN	ex works €	-		For an explanation on the pictos, see front flap						
0,001	0,3	60.000	CFS 300-3	460,-	76	1		•	•	•	•	0	
0,001	0,36	360.000	CKE 360-3	370,-	77	1		٠		•		0	
0,001	6	1.200.000	CCS 6K-6	600,-	82	2		•	•	•	•	0	
0,001	15 3	300.000	CCS 10K-6 CFS 3K-5	660,-	82	2		•	•	•	•	<u> </u>	
0,01	3,6	60.000 360.000	CFS 3K-5 CKE 3600-2	<u> </u>	70	1						- 0	
0,01	3   6	6.000.000	CCA 6K-5M	940,-	80	2	0	•	•	•		0	
0,01	6   15	15.000.000	CCA 10K-5M	940,-	80	2	0	٠	•	٠		0	
0,01	30	600.000	CCS 30K0.01.	630,-	82	2		٠	•	•	•	0	
0,01	15   30	30.000.000	CCA 30K-5M	1010,-	80	2	0	•	•	•		0	
0,01	30   60	60.000.000	CCA 60K-5M	1010,-	80	2	0	•	•	•		0	
0,01	60 60	1.200.000	CCS 60K0.01. CCS 60K0.01L.	<u>630,-</u> 650,-	82	2			•	•		0 0	
0,01	60   150	150.000.000	CCA 100K-5M	1120,-	80	2	0	•	•	•		0	
0,01	150	3.000.000	CCS 150K0.1L	920,-	82	2		•	•	•	•	0	
0,01	150   300	300.000.000	CCA 300K-5M	1350,-	80	2*	0	٠	٠	٠		0	
0,01	300	6.000.000	CCS 300K0.01	970,-	82	2*		•	•	•	•	0	
0,01	600	12.000.000	CCS 600K-2U	1620,-	82	4*		•	•	•	•	0	
0,02	<u>4</u> 6	200.000 300.000	CDS 4K0.02 CKE 6K0.02	<u> </u>		1		•		•		<u> </u>	
0,02	8	160.000	CKE 8K0.02	470,-	77	1						- 0	
0,05	15	300.000	CDS 15K0.05	520,-	79	1		•		•		0	
0,05	16	320.000	CKE 16K0.05	570,-	77	1		•		•		0	
0,1	6	60.000	CPB 6K0.1N	265,-	75	1		٠		٠		0	
0,1	6	60.000	CFS 6K0.1	310,-	76	1		٠	٠	٠	•	0	
0,1	16	160.000	CKE 16K0.1	500,-		1		•		•		0	
0,1	16 30	160.000 300.000	CDS 16K0.1 CCS 30K0.1.	510,-	<u>79</u> 82	1		•	•	•	•	0 0	
0,1	30	300.000	CDS 30K0.1	580,- 590,-	79	1		•				- 0	
0,1	30	300.000	CDS 30K0.1L	830,-	79	1		•		•		0	
0,1	36	360.000	CKE 36K0.1	530,-	77	1		٠		•		0	
0,1	60	600.000	CCS 60K0.1.	630,-	82	2		٠	٠	•	•	0	
0,1	60	600.000	CCS 60K0.1L.	690,-	82	2		٠	•	•	•	0	
0,1	150	1.500.000	CCS 150K0.1.	730,-	82	2		•	•	•	•	0	
0,1 0,1	150 300	3.000.000	CCS 150K0.01L CCS 300K0.1	<u> </u>	82	2		•	•	•	•	0 0	
0,1	300   600	6.000.000	CCS 600K-1S	1500,-	82	4*		•	•	•			
0,1	300   600	6.000.000	CCS 600K-1	1880,-	82	4*		•	•	•	•	0	
0,1	600   1500	15.000.000	CCS 1T-4S	1520,-	82	4*		۲	٠	٠	•	0	
0,1	600   1500	15.000.000	CCS 1T-4	1870,-	82	4*		٠	٠	•	•	0	
0,1	1500	15.000.000		1540,-	82	4*	-	•	•	•	•	0	
0,1	1500   2000	15.000.000		2290,-	82	4* 4*		•	•	•	•	0	
0,1	1500   3000	30.000.000		<u>1870,-</u> 2130,-	82	4" 4*		•	•	•		0	
0,1   0,2	3   6	60.000		450,-	78	1		•	•	•		0	
0,1   0,2	6   15	75.000	IFS 10K-4	480,-	78	1		•	•	•		0	
0,2	3	30.000	CIB 3K-4	245,-	73	1		۲				•	
0,2	3	30.000	CXB 3K0.2	290,-	74	1		٠				•	
0,2	15	60.000	CPB 15K0.2N	265,-	75	1		•	-	•		0	
0,2	15	75.000		310,-	76	1		•	•	•	•	0 0	
0,2	<u>36</u> 60	180.000 300.000		<u>830,-</u> 830,-		1		•		•		0	
0,2	65	325.000	CKE 65K0.2	520,-	77	1		•		•			
0,2   0,5	12   30	60.000		540,-	78	1		•	•	•		0	
0,5	6	30.000		245,-	73	1		٠				•	
0,5	6	30.000		290,-	74	1		•				•	
0,5	30	60.000		265,-	75	1	-	•	-	•	-	0	
0,5 0,5   1	30 30   60	60.000	CFS 30K0.5 IFS 60K0.5D	<u> </u>		1		•	•	•	•	0 0	
0,5   1	30   60	60.000	IFS 60K0.5DL	<u> </u>	78	1			•			0	
1	3	30.000	CXB 3K1NM	<u> </u>	70	1	0	•				•	
1	15	30.000	CIB 10K-3	245,-	73	1		٠				•	
1	15	30.000	CXB 15K1	290,-	74	1		٠				•	
1	50	50.000		360,-	76	1		•	•	•	•	0	
1   2	3   6	30.000		940,-	80	1	0	•	•	•		0	
2	3   6	60.000	IFS 6K-3SM IFS 6K-3M	<u>420,-</u> 420,-		1	0 0	•	•	•		0 0	
1   2	3 6	60.000		265,-	75	1		•	-	•		- 0	
1   2	75   150	60.000		203,- 750,-	78	1		•	•	•		0	
1   2	75   150	60.000		950,-	78	1		•	•	•		0	
				,									

News 2022

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\* Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping costs

<sup>• =</sup> standard • = option

# **Quick-Finder Counting scales/Counting systems**

Readability [d]	Weighing capacity [Max]	Counting resolution	Model	Price excl. of VAT ex works	Page	DAYS	Μ	CAL EXT	MEMORY	RS 232	<b>□↔</b> □ DUAL	ACCU	
g	kg	Points	KERN	€			For an explanation on the pictos, see front flap						
2	30	30.000	CIB 30K-3	245,-	73	1		٠				•	
2	30	30.000	CXB 30K2	290,-	74	1		٠				•	
2   5	6   15	60.000	CPB 15K2DM	265,-	75	1	0	۲		٠		0	
2   5	6   15	75.000	IFS 10K-3M	420,-	78	1	0	۲	٠	٠		0	
2   5	6   15	75.000	IFS 10K-3LM	490,-	78	1	0	۲	٠	٠		0	
2   5	6   15	75.000	IFS 300K-3	950,-	78	1		۲	٠	٠		0	
2   5	6   15	75.000	CCA 10K-4M	940,-	80	1	0	•	•			0	
5	15	30.000	CXB 15K5NM	315,-	74	1	0	۲				•	
5	150	3.000.000	CCS 150K0.01	730,-	82			۲	٠	٠	•	0	
5   10	15   30	1.500.000	CCA 30K-4M	1010,-	80	1	0	•	•	•		0	
10	30	30.000	CXB 30K10NM	315,-	74	1	0	۲				•	
10   20	30   60	60.000	IFS 60K-2M	490,-	78	1	0	۲	٠	•		0	
10   20	30   60	60.000	IFS 60K-2LM	620,-	78	1	0	۲	٠	•	•	0	
10   20	30   60	3.000.000	CCA 60K-4M	1010,-	80	1	0	•	•	•		0	
20   50	60   150	60.000	IFS 100K-2M	620,-	78	1	0	۲	•	•	•	0	
20   50	60   150	60.000	IFS 100K-2LM	820,-	78	1	0	۲	٠	٠	٠	0	
20   50	60   150	7.500.000	CCA 100K-4M	1120,-	80	1	0	•				0	
50	15   30	60.000	CPB 30K5DM	265,-	75	1	0	۲		•		0	
50	15   30	60.000	IFS 30K-3M	490,-	78	1	0	۲	۲	٠		0	
50	150	1.500.000	IFS 300K-2M	820,-	78	1	0	۲	٠	٠	٠	0	
50   100	150   300	15.000.000	CCA 300K-4M	1350,-	80	1	0	۲	•	•		0	
News 2022	2	* Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping costs								• = standard • = option			









Robust counting scale with large article memory, convenient operating philosophy and checkweighing display, counting resolution up to 30,000 points

### Features

• Innovative counting with tolerance range (Checkweighing):

The counting process can be supported visually and/or audibly and this therefore makes portion division, dispensing and grading easier

- visual signal: the colour of the display changes depending on the counting result (not enough/ok/too much)
- audible signal: the frequency of the audible signal changes depending on the counting result (not enough/ok/too much)
- Ideal for workshops for people with disabilities, particularly loud or quiet environments, where operators change frequently, etc.
- Three displays for weight display, reference weight, total pieces
- Precise counting: The automatic reference weight optimisation of reference weight gradually improves the average piece weight value
- Programmable using numerical key pad:
- required reference quantity
- known reference weight



- Counting results memory: adds up all individual piece counts, result is shown in total weight and total pieces
- PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels
- 20 direct price keys for frequently recurring reference weights and PRE-Tare values
- Memory for 50 reference weights and PRE-Tare values
- High mobility: thanks to battery operation, compact, lightweight construction, it is suitable for the use in several locations
- Two balances in one: Changes from counting mode to weighing mode at the touch of a key
- Energy management: Backlight turns off after 5 sec, can be switched off
- Protective working cover included with delivery

### **Technical data**

 Large backlit LCD displays, digit height 18 mm
 Dimensions weighing surface, Stainless Steel, W×D 350×215 mm Overall dimensions W×D×H, 350×330×120 mm

09

- Net weight approx. 4,0 kg
- Permissible ambient temperature, Permissible ambient temperature -10 °C/40 °C

### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN RIB-A01S05, € 40,-
- Internal rechargeable battery pack, operating time up to 160 h without backlight, charging time approx. 14 h, KERN GAB-A04, € 40,-

Model	Weighing capacity	Readability	Smallest part	Counting resolution	Price	Option	
			weight			DAkkS Calibr. Ce	ertificate
	[Max]	[d]	[Normal]	Points	ex works	DAkkS	
KERN	kg	g	g/piece		€	KERN	€
CIB 3K-4	3	0,2	1	30.000	245,-	963-127	82,-
CIB 6K-4	6	0,5	2	30.000	245,-	963-128	99,-
CIB 10K-3	15	1	5	30.000	245,-	963-128	99,-
CIB 30K-3	30	2	10	30.000	245,-	963-128	99,-





Note: Official verification is mandatory for commerical trade.

### Entry level model into professional counting, also with EC type approval [M], counting resolution of 30,000 points

### Features

- · Precise counting: The automatic reference 09 weight optimisation of reference weight gradually improves the average piece weight value
  - Programmable using numerical key pad:
    - required reference quantity
    - known reference weight
  - Three displays for weight display, reference weight, total pieces
  - Audible Fill-to-target: target quantity or target weight can be programmed, e.g. for checkweighing. When the target value is reached, a signal will sound
  - · 10 memories for reference weights
  - · Counting results memory: adds up all individual piece counts, result is shown in total weight and total pieces
  - · Energy management: Backlight turns off after 5 sec

### STANDARD

STANDARD	)						OPTION	FACTORY
			<b></b>	<b></b> E			DAkkS	Μ
CAL EXT	PCS	SUM	ACCU	230 V	DMS	1 DAY	+3 DAYS	+3 DAYS
								CYR-NM

- PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels
- Two balances in one: Changes from counting mode to weighing mode at the touch of a key
- · Protective working cover included with delivery
- · Internal rechargeable battery pack included with the delievery

### **Technical data**

- · Large backlit LCD displays, digit height 18 mm
- · Dimensions weighing surface, Stainless Steel, W×D 300×225 mm
- Dimensions housing W×D×H, 300×330×110 mm
- Internal rechargeable battery pack, operating time up to 200 h without backlight, charging time approx. 8 h
- Net weight approx. 4,0 kg

Permissible ambient temperature -10 °C/40 °C

### Accessories

- Protective working cover, scope of delivery: 5 items, KERN CXB-A01S05, € 40,-
- · Internal rechargable battery pack, operating time up to 200 h without backlight, charging time approx. 8 h, KERN GAB-A04, € 40,-

Model	Weighing	Readability	Verification	Minimal	Smallest part	Counting	Net weight	Price	Option			
	capacity		value	load	weight	resolution		excl. of VAT	Verifica	Verification DAkkS Calibr		rtificate
	[Max]	[d]	[e]	[Min]	[Normal]		approx.	ex works	MIII		DAkkS	
KERN	kg	g	g	g	g/piece	Points	kg	€	KERN	€	KERN	€
CXB 3K0.2	3	0,2	-	-	1	30.000	4,0	290,-	-	-	963-127	82,-
CXB 6K0.5	6	0,5	-	-	2	30.000	4,0	290,-	-	-	963-128	99,-
CXB 15K1	15	1	-	-	5	30.000	4,0	290,-	-	-	963-128	99,-
CXB 30K2	30	2	-	-	10	30.000	4,2	290,-	-	-	963-128	99,-
Note: F	Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible.											

Verification at the factory, we need to know the full address of the location of use.

CXB 3K1NM	3	1	1	20	1	30.000	4,0	315,-	965-227	55,-	963-127	82,-
CXB 6K2NM	6	2	2	40	2	30.000	4,2	315,-	965-228	70,-	963-128	99,-
CXB 15K5NM	15	5	5	100	5	30.000	4,0	315,-	965-228	70,-	963-128	99,-
CXB 30K10NM	30	10	10	200	10	30.000	4,2	315,-	965-228	70,-	963-128	99,-





**Note:** Official verification is mandatory for commerical trade.

# Professional model, also with EC type approval [M], counting resolution up to 60,000 points

### Features

- Precise counting: The automatic reference weight optimisation of reference weight gradually improves the average piece weight value
- Programmable using numerical key pad:
  - required reference quantity
  - known reference weight
- Three displays for weight display, reference weight, total pieces
- Counting results memory: adds up all individual piece counts, result is shown in total weight and total pieces
- Fill-to-target function: Target count or target weight can be programmed. When the target weight is reached there is an audible and visual signal
- PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels

- High mobility: thanks to rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations (production, warehouse, dispatch department etc.)
- Two balances in one: Changes from counting mode to weighing mode at the touch of a key
- Protective working cover included with delivery

### **Technical data**

- Large backlit LCD displays, digit height 20 mm
- Dimensions weighing surface, Stainless Steel, W×D 295×225 mm Overall dimensions W×D×H 315×350×105 mm
- Net weight approx. 3,2 kg
- Permissible ambient temperature 0 °C/40 °C

### Accessories

Protective working cover, scope of delivery:
 5 items, KERN CFS-A02S05, € 40,-

- Internal rechargeable battery pack, operating time up to 90 h without backlight, charging time approx. 12 h, KERN GAB-A04, € 40,-
- ■ Signal lamp for visual support of weighing with tolerance range, only in combination with, KERN CFS-A03, € 280,-
- Y-cable for parallel connection of two terminal devices to the RS-232 interface on the scale, e.g. signal lamp and printer, KERN CFS-A04, € 35,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD	OPTION	FACTORY
Image: CAL EXT     KCP     Image: CAL EXT     Image: CAL EXT	ACCU DAkkS	+3 DAYS

Model	Weighing	Readability	Verification	Minimal load Smallest part		Counting	Price			Option		
	capacity		value	weight		resolution	excl. of VAT	Verifica	ification DAkkS Calibr. Certi		ertificate	
	[Max]	[d]	[e]	[Min]	[Normal]		ex works	MIII)		DAkkS		
KERN	kg	g	g	g	g/piece	Points	€	KERN	€	KERN	€	
CPB 6K0.1N	6	0,1	-	-	1	60.000	265,-	-	-	963-128	99,-	
CPB 15K0.2N	15	0,2	-	-	2,5	60.000	265,-	-	-	963-128	99,-	
CPB 30K0.5N	30	0,5	-	-	5	60.000	265,-	-	-	963-128	99,-	
	Dua	l-range balanc	e switches au	itomatically to	the next large	st weighing ca	pacity [Max] a	nd readibility	/ [d]			
Note: F	or application	s that require	verification, p	olease order v	erification at th	e same time, i	nitial verificati	on at a later	date is r	ot possible.		
	Verification at the factory, we need to know the full address of the location of use.											

CPB 6K1DM	3   6	1   2	1   2	20	1	60.000	265,-	965-228	70,-	963-128	99,-		
CPB 15K2DM	6   15	2   5	2   5	40	2,5	60.000	265,-	965-228	70,-	963-128	99,-		
CPB 30K5DM	15   30	5   10	5   10	100	5	60.000	265,-	965-228	70,-	963-128	99,-		









Professional, high-resolution counting scale with 100 item memories and second balance interface, counting resolution up to 75,000 points

### Features

- Memory (PLU) for 100 items with additional text, reference weight and tare weight, e.g. of a container
  - Precise counting: The automatic reference weight optimisation of reference weight gradually improves the average piece weight value
  - Programmable using numerical key pad:
  - required reference quantity
  - known reference weight
  - Three displays for weight display, reference weight, total pieces
  - Weighing with tolerance range (checkweighing): a visual and audible signal helps with portioning, dispensing or grading
  - Fill-to-target function Programmable target quantity or target weight. A signal will be displayed when the
  - target value is reached
    PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels

- Second balance interface to construct a high-resolution counting system, standard, e.g. with weighing bridges of KERN KFP V20
- Protective working cover included with delivery, for models with weighing plate size
   A, D

### **Technical data**

- Large backlit LCD displays, digit height 20 mm Dimensions weighing surface
- A Ø 80 mm B W×D 295×225 mm
- W×D 370×240 mm
- Overall dimensions W×D×H
   315×350×180 mm (incl. draught shield)
- 315×350×180 mm
- 375×350×130 mm
  Permissible ambient temperature 0 °C/40 °C

### Accessories

- Protective working cover, scope of delivery:
  5 items, for models with weighing plate size
  ▶, KERN CFS-A02S05, € 40,-
- Internal rechargeable battery pack, operating time up to 70 h without backlight, charging time approx. 14 h, KERN GAB-A04, € 40,-
- Signal lamp for visual support of weighing with tolerance range, only in combination with, KERN CFS-A03, € 280,-
- Y-cable for parallel connection of two terminal devices to the RS-232 interface on the scale, e.g. signal lamp and printer, KERN CFS-A04, € 35,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD	OPTION				
CAL EXT MEMORY RS 232	KCP PROTOCOL DUAL	LIA SUM TOL A → → → → → → → → → → → → → → → → → → →	DMS 1 DAY	ET ACCU	DAkkS +3 DAYS

Model	Weighing	Readability	Smallest part	Counting	Net weight	Weighing plate	Price	Option	
	capacity		weight	resolution			excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]	[Normal]		approx.		ex works	DAkkS	
KERN	kg	g	g/piece	Points	kg		€	KERN	€
CFS 300-3	0,3	0,001	0,05	60.000	2,6	А	460,-	963-127	82,-
CFS 3K-5	3	0,01	0,5	60.000	3,4	В	360,-	963-127	82,-
CFS 6K0.1	6	0,1	1	60.000	3,2	В	310,-	963-128	99,-
CFS 15K0.2	15	0,2	2	75.000	3,4	В	310,-	963-128	99,-
CFS 30K0.5	30	0,5	5	60.000	3,4	В	310,-	963-128	99,-
CFS 50K-3	50	1	10	50.000	4,4	С	360,-	963-128	99,-









Easy to use, self-explanatory counting scale with laboratory accuracy, counting resolution up to 360,000 points

### Features

STANDARD

- Self-explanatory graphic control panel, the workings steps can be understood immediately, even without operating instructions
  - no learning time = reduces costs
  - ideal for untrained users
  - visualised process avoids operating errors
- The 4 steps are carried out from left to right:
  Place the empty container onto the weighing plate and tare by pressing the TARE key
  Place the reference quantity for the goods to be counted into the container (5, 10, 20 or any number of pieces)

Confirm the selected reference quantity by pressing the key (5, 10, 20 or any number of pieces)

Pour in the goods to be counted. The number of pieces will immediately be shown in the display

 Precise counting: The automatic reference weight optimisation of reference weight gradually improves the average piece weight value

- Two balances in one: Changes from counting mode to weighing mode at the touch of a key
- Draught shield standard for models with weighing plate size Ø 81 mm, weighing space Ø 90×40 mm
- · Protective working cover included with delivery

### **Technical data**

- Large backlit display
   A, B digit height 9 mm
- I digit height 18 mm
- Dimensions weighing surface
  Ø 81 mm, plastic
  W×D 150×170 mm, stainless steel
  W×D 340×240 mm, stainless steel
- Overall dimensions W×D×H
   M. B 167×250×85 mm
- **3**50×390×120 mm
- Optional battery operation,6×1.5 V Size C not included, operating time up to 40 h, for models with weighing plate size
- Permissible ambient temperature 10 °C/40 °C

#### Accessories

FACTORY

- Protective working cover, scope of delivery: 5 items, for models with weighing plate size
  KERN PCB-A02S05, € 40,KERN PCB-A05S05, € 40,KERN FKB-A02S05, € 40,-
- Rechargeable battery pack external, operating time up to 30 h without backlight, charging time approx. 10 h, KERN KS-A01, € 160,-
- Internal rechargable battery pack, operating time up to A, B 30 h, P 90 h without backlight, charging time approx. 10 h,
  A, B KERN KB-01N, € 55,KERN PCB-A01, € 80,-
- USB data interface, for transferring weighing to the PC, printer etc., for models with weighing plate size **I**, KERN CKE-A02, € **65**,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

KCP	GLP 🤼 📿			<b>I 🏊 </b>					
CAL EXT RS 232 PROTOCOL	PRINTER PCS UN	IT TOL UNDER		MS 1 DAY E	T ACCU +3 DAYS	USB C			
Model	Weighing	Readability	Smallest part	Counting	Net weight	Weighing plate	Price	Option	
	capacity		weight	resolution			excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]	[Normal]		approx.		ex works	DAkkS	
KERN	kg	g	g/piece	Points	kg		€	KERN	€
CKE 360-3	0,36	0,001	0,01	360.000	1	А	370,-	963-127	82,-
CKE 3600-2	3,6	0,01	0,1	360.000	1,8	В	400,-	963-127	82,-
CKE 6K0.02	6	0,02	0,2	300.000	7	C	510,-	963-128	99,-
CKE 8K0.05	8	0,05	0,5	160.000	7	С	470,-	963-128	99,-
CKE 16K0.05	16	0,05	0,5	320.000	7	C	570,-	963-128	99,-
CKE 16K0.1	16	0,1	1	160.000	7	С	500,-	963-128	99,-
CKE 36K0.1	36	0,1	1	360.000	7	С	530,-	963-128	99,-
CKE 65K0.2	65	0,2	2	325.000	7	C	520,-	963-129	122,-

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Industrial counting scale with convenient decimal keypad for easy data entry – now also with EC type approval [M], counting resolution up to 75000 points

### Features

- Tough industry standard suitable for use in harsh industrial applications
- Ergonomic display device with large keypad and high-contrast LCD display for easy entry and reading of, e.g., tare weights, reference weights, limit values etc.

- Three displays for weight display, reference weight, total pieces
- 100 item memories for master data such as reference weight, reference quantity, container weight (PRE-TARE) etc.
- Printout of date and time for GLP and GMP compliant data logging

- Precise counting: The manual reference weight optimisation gradually improves the average value of the piece weight
- Totalising of pieces when counting
- Protective working cover included with delivery

### **Technical data**

- Large backlit LCD displays, digit height 16,5 mmDimensions weighing surface, Stainless Steel
  - A 230×230×110 mm
  - B 300×240×110 mm
- 300×240×110 mm ■ 400×300×120 mm
- 500×400×140 mm
   650×500×140 mm



- Dimensions of display device W×D×H 260×150×65 mm
- Cable length of display device approx. 3 m
- Permissible ambient temperature -10 °C/40 °C

### Accessories

- Protective working cover, scope of delivery: 5 items, KERN KFB-A02S05, € 40,-
- ■ Stand to elevate display device Height of stand approx. 330 mm, KERN IFB-A01, € 60,-

Height of stand approx. 600 mm, for models with weighing plate size **D**, **E**, KERN IFB-A02, **€ 70,-**

- Internal rechargable battery pack, operating time up to 40 h, without backlight, charging time approx. 12 h, must be ordered at purchase, KERN KFB-A01, € 35,-
- ESD drain to protect against electrostatic discharge e.g. for electrostatically-charged weighing objects or people who work with the scale, KERN YGR-01, € 55,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

	OFTION	TACTORT
Image: Second state     Image: Second st	ET DAkkS	ACCU +3 DAYS

								IFS-M				
Model	Weighing	Readability	Verification	Smallest part	Counting	Net weight	Weighing	Price		(	Option	
	capacity		value	weight	resolution		plate	excl. of VAT	Verifica	tion	DAkkS Calibr. Co	ertificate
	[Max]	[d]	[e]	[Normal]		approx.		ex works	MIII		DAkkS	
KERN	kg	g	g	g/piece	Points	kg		€	KERN	€	KERN	€
		Dual-range	balance swi	itches automat	ically to the ne	xt largest we	ighing cap	pacity [Max] a	nd readibility	y [d]		
IFS 6K-4S 3   6 0,1   0,2 - 1 60.000 4,6 🖪 450, 963-128 99,-												
IFS 10K-4	6   15	0,1   0,2	-	2	75.000	6	В	480,-	-	-	963-128	99,-
IFS 30K0.2DL	12   30	0,2   0,5	-	5	60.000	11	С	540,-	-	-	963-128	99,-
IFS 60K0.5D	30   60	0,5   1	-	10	60.000	10	C	540,-	-	-	963-129	122,-
IFS 60K0.5DL	30   60	0,5   1	-	10	60.000	12	D	660,-	-	-	963-129	122,-
IFS 100K-3	75   150	1   2	-	25	60.000	12	D	750,-	-	-	963-129	122,-
IFS 100K-3L	75   150	1   2	-	25	60.000	20	E	950,-	-	-	963-129	122,-
IFS 300K-3	150   300	2   5	-	50	60.000	22	E	950,-	-	-	963-129	122,-
No	te: For appli	cations that	require verif	ication, please	order verificat	ion at the sar	ne time, i	nitial verificat	ion at a later	date is r	ot possible.	
			Verification	at the factory,	we need to kn	ow the full ac	dress of t	the location o	f use.			
IFS 6K-3SM	3   6	1   2	1   2	1	60.000	6	A	420,-	965-228	70,-	963-128	99,-
IFS 6K-3M	3   6	1   2	1   2	1	60.000	6	В	420,-	965-228	70,-	963-128	99,-
IFS 10K-3M	6   15	2   5	2   5	2	75.000	6	В	420,-	965-228	70,-	963-128	99,-
IFS 10K-3LM	6   15	2   5	2   5	2	75.000	10	C	490,-	965-228	70,-	963-128	99,-
IFS 30K-3M	15   30	5   10	5   10	5	60.000	10	C	490,-	965-228	70,-	963-128	99,-
IFS 60K-2M	30   60	10   20	10   20	10	60.000	11	C	490,-	965-229	93,-	963-129	122,-
IFS 60K-2LM	30   60	10   20	10   20	10	60.000	13	D	620,-	965-229	93,-	963-129	122,-
IFS 100K-2M	60   150	20   50	20   50	25	60.000	12	D	620,-	965-229	93,-	963-129	122,-
IFS 100K-2LM	60   150	20   50	20   50	25	60.000	22	E	820,-	965-229	93,-	963-129	122,-
IFS 300K-2M	150   300	50   100	50   100	50	60.000	22	E	820,-	965-229	93,-	963-129	122,-



# Easy to use industrial counting scale for heavy loads, counting resolution up to 300,000 points

### Features

- Self-explanatory graphic control panel, the workings steps can be understood immediately, even without operating instructions
- no learning time = reduces costs
- ideal for untrained users
- visualised process avoids operating errors
- The 4 steps are carried out from left to right:
  Place the empty container onto the weighing plate and tare by pressing the TARE key
  Place the reference quantity for the goods to be counted into the container (5, 10 or 20 pieces)
  Confirm the selected reference quantity by pressing the key (5, 10 or 20)
  Pour in the goods to be counted. The number of pieces will immediately be shown in the display
- Precise counting: The automatic reference weight optimisation of reference weight gradually improves the average piece weight value
- · Protective working cover included with delivery

### Technical data

- Backlit LCD display, digit height 18 mm
- Dimensions weighing surface, Stainless Steel
  W×D 228×228 mm
  W×D 308×318 mm
- W×D 450×350 mm
  Dimensions of display device W×D×H
- 225×115×60 mm
- Permissible ambient temperature 10 °C/40 °C

### Accessories

- Protective working cover over the display device, scope of delivery: 5 items, KERN DE-A12S05, € 40,-
- Mount to fasten the display device to the platform, for models with weighing plate size
   , can be reordered, KERN DE-A11N, € 40,-

- Stand to elevate display device, height of stand approx. 480 mm, can be reordered, KERN DE-A10, € 120,-
- Rechargeable battery pack external, operating time up to 30 h without backlight, charging time approx. 10 h, KERN KS-A01, € 160,-
- Internal rechargeable battery pack, operating time up to 30 h without backlight, charging time approx. 10 h, KERN KB-A01N, € 55,-
- Set for underfloor weighing, consists of platform, bow, hook, only for models with weighing plate ■, KERN DS-A01, € 210,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD	 	OPTION		
CAL EXT	DMS 1 DAY	UNDER B	ACCU	DAkkS +3 DAYS

		D								
Model	Weighing	Readability	Smallest part	Counting	Net weight	Cable length	Weighing plate	Price	Option	
	capacity		weight	resolution				excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]	[Normal]		approx.	approx.		ex works	DAkkS	
KERN	kg	g	g/piece	Points	kg	m		€	KERN	€
CDS 4K0.02	4	0,02	0,2	200.000	6	2	А	580,-	963-127	82,-
CDS 15K0.05	15	0,05	0,5	300.000	8	2	В	520,-	963-128	99,-
CDS 16K0.1	16	0,1	1	160.000	8	2	В	510,-	963-128	99,-
CDS 30K0.1	30	0,1	1	300.000	8	2	В	590,-	963-128	99,-
CDS 30K0.1L	30	0,1	1	300.000	10	0,6	С	830,-	963-128	99,-
CDS 36K0.2L	36	0,2	2	180.000	10	0,6	C	830,-	963-128	99,-
CDS 60K0.2	60	0,2	2	300.000	10	0,6	С	830,-	963-129	122,-



High-resolution counting system with EC type approval to count the smallest parts in large quantities, maximum number of parts which can be displayed is 999,999 – many new models now

### Features

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- The highly accurate KERN CCA counting system can replace a whole range of individual balances, efficiently and at a reasonable price
- Thanks to EC type approval, it is also suitable for use in verified applications
- The balances are connected to one another with an RS-232 Y-cable, which also allows you to connect an end unit, such as, for example, signal lamps, barcode scanners or printers

### Reference scale KERN

- This precision balance, which can be used as an individual balance, also fulfils the highest demands through connection with a high-capacity weighing bridge
- Programmable using numerical key pad:
   required reference quantity
- known reference weight
- Easy to use: All primary functions have their own key on the keypad
- Automatic internal adjustment, time-controlled every 2 h, guarantees high degree of accuracy and makes the balance independent of its location
- Capacity display: A bargraph display lights up to show how much of the weighing range is still available
- USB data interface for transferring weighing data to the PC, printer etc. Can only be used in combination with KERN DBS-A02 accessories
- Draught shield standard for models with [Max] 600 g, Weighing space W×D×H 134×128×80 mm
- · Protective working cover included with delivery

### **Quantity scale KERN IFS**

- The high-accuracy quantity counting takes place on the weighing platform (= weighing bridge) KERN CCA. In this way even the smallest of parts can be counted in large volumes
- Tough industry standard suitable for use in harsh industrial applications
- Ergonomic display device with large keypad and high-contrast LCD display for easy entry and reading of, e.g., tare weights, reference weights, limit values etc.
- Three displays for weight display, reference weight, total pieces
- 100 item memories for master data such as reference weight, reference quantity, container weight (PRE-TARE) etc.
- Precise counting: The manual reference weight optimisation gradually improves the average value of the piece weight
- Totalising of pieces when counting
- $\ensuremath{\,\cdot\,}$  Printout with date and time
- Aluminium singlepoint load cell (1×3000 e),
- protection against dust and water splashes IP65
- Protective working cover included with delivery

### Counting system KERN CCA







### **Technical data**

### Reference scale KERN EWJ

- Overall dimensions
   [Max] 600 g: 220×340×180 mm (incl. draught shield)
   [Max] 6000 g: 220×315×90 mm
- Dimensions of weighing surface, stainless steel,
  [Max] 600 g: Ø 120 mm
- [Max] 6000 g: B×T 155×145 mm • Net weight [Max] 600 g: 3,2 kg [Max] 6000 g: 3,4 kg
- Connection cable approx. 1,5 m

### Quantity scale KERN IFS

- Dimensions of weighing plate
- A 300×240×110 mm
- B 400×300×120 mm
- C 500×400×140 mm
- D 650×500×140 mm





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### Accessories

### Reference scale KERN EWJ

- ■ Protective working cover, scope of delivery: 5 items, KERN EWJ-A04S05, € 40,-
- Internal rechargable battery pack, operating time up to 15 h without backlight, charging time approx. 4h, KERN KFB-A01, € 35,-

### **Quantity scale KERN IFS**

- ■ Protective working cover, scope of delivery: 5 items, KERN KFB-A02S05, € 40,-
- I Stand to elevate display device Height of stand approx. 330 mm, KERN IFB-A01, € 60,-Height of stand approx. 600 mm, for models with weighing plate size I, D, KERN IFB-A02, € 70,-
- Internal rechargable battery pack, operating time up to 18 h without backlight, charging time approx. 12 h, Factory Option, KERN KFB-A01, € 35,-
- **I** Signal lamp for visual support of weighing with tolerance range, only in combination with CCA-A02, KERN CFS-A03, € **280,-**
- Y-cable, RS-232, KERN CCA-A01, € 46,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDAR	D														OPTION		FACTORY	
			•		Å		%	C	-√+ ∋₀		B		<b>.</b>	<b></b> )		DAkkS		Μ
CAL INT	CAL EXT	MEMORY	RS 232	PCS	RECIPE	SUM	PERCENT	UNIT	TOL	MULTI	MULTI	DMS	2 DAYS	4 DAYS	ACCU	+3 DAYS	ACCU	+3 DAYS
EWJ	IFS	IFS	occupied		EWJ	IFS		EWJ	IFS	IFS	EWJ		A C	D	EWJ		IFS	

						,				
Model	Weighing capacity	Readability	Weighing	Weighing capacity	Readability	Counting	Smallest part	Price	Option	n
	Quantity scale	Quantity scale	plate	Reference scale	Reference scale	resolution	weight	excl. of VAT	Verificat	tion
	[Max]	[d]		[Max]	[d]		[Normal]	ex works	MIII	
KERN	kg	g		g	g	Points	g/piece	€	KERN	€
Note	e: For applications t	hat require verif	ication, ple	ease order verificat	tion at the same	time, initial verif	cation at a later	date is not po	ossible.	
		Verification	at the fact	tory, we need to kr	low the full addre	ess of the location	n of use.			
CCA 6K-5M	3   6	1   2	A	600	0,01	30.000	0,2	940,-	965-228-216	121,-
CCA 6K-4M 🔤	3   6	1   2	A	6000	0,1	30.000	0,2	940,-	965-228-217	137,-
CCA 10K-5M	6   15	2   5	A	600	0,01	75.000	0,2	940,-	965-228-216	121,-
CCA 10K-4M 🔤	6   15	2   5	A	6000	0,1	75.000	0,2	940,-	965-228-217	137,-
CCA 30K-5M	15   30	5   10	В	600	0,01	150.000	0,2	1010,-	965-228-216	121,-
ССА 30К-4М 🔤	15   30	5   10	В	6000	0,1	1.500.000	0,2	1010,-	965-228-217	137,-
CCA 60K-5M	30   60	10   20	В	600	0,01	300.000	0,2	1010,-	965-229-216	159,-
ССА 60К-4М 🔤	30   60	10   20	В	6000	0,1	3.000.000	0,2	1010,-	965-229-217	165,-
CCA 100K-5M	60   150	20   50	C	600	0,01	750.000	0,2	1120,-	965-229-216	159,-
CCA 100K-4M 🔤	60   150	20   50	С	6000	0,1	7.500.000	0,2	1120,-	965-229-217	165,-
CCA 300K-5M	150   300	50   100	D	600	0,01	1.500.000	0,2	1350,-	965-229-216	159,-
ССА 300К-4М 🔤	150   300	50   100	D	6000	0,1	15.000.000	0,2	1350,-	965-229-217	165,-

New model



Counting system to count the smallest parts in large quantities, maximum number of parts which can be displayed is 999,999

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### Features

• The highly accurate KERN CCS counting system can replace a whole range of individual balances, efficiently and at a reasonable price

### Reference scale KERN CFS

- This professional counting scale, which can also be used as a stand-alone scale, meets the highest demands for accuracy, weighing capacity and volume of items, by being connected to a high-capacity weighing bridge
- Programmable using numerical key pad:
   required reference quantity
- known reference weight
- Three displays for weight display, reference weight, total pieces
- Memory (PLU) for 100 items with additional text, reference weight and tare weight, e.g. of a container
- Fill-to-target function: Target count or target weight can be programmed. When the target weight is reached there is an audible and visual signal
- Precise counting: The automatic reference weight optimisation of reference weight gradually improves the average piece weight value
- · Protective working cover included with delivery

### **Quantity scale KERN**

• The high-accuracy quantity counting takes place on the weighing platform (= weighing bridge). In this way even the smallest of parts can be counted in large volumes

### KFP-V20 IP67, KFU-V20

- Stainless steel weighing plate, painted steel base, for models with weighing plate size
   Image: A - Image:
- Aluminium singlepoint load cell (1×3000 e), protection against dust and water splashes IP65

### KFP-V20 IP67, KIP-V20M

- Weighing bridge made of non-slip corrugated steel plate, lacquered, for models with weighing plate size III-ISI
- 4 load cells, steel, silicone-coated, IP67

### KFU-V20

- Load range: painted steel
- · 4 load cells, alloy steel, silicone-coated, IP67

### Counting system KERN CCS



### Technical data

### Reference scale KERN CFS

- Overall dimensions W×D×H 315×350×180 mm
- Dimensions weighing surface, stainless steel
   CFS 300-3: Ø 80 mm
   CFS 3K-5, CFS 6K0.1: W×D 295×225 mm
- Draught shield standard for models with weighing plate size Ø 80 mm, weighing space
- B×T×H 158×143×64 mm
- Net weight approx. 2,6 kg

### Quantity platforms, KERN KFP-V20 IP65

- Weighing plate dimensions W×D×H, stainless steel
- A 230×230×110 mm
- 300×240×110 mm
  400×300×125 mm
- 400×300×125 mm
- 500×400×137 mm

### 650×500×135 mm

### Bulk weighing bridges, KFP-V20 IP67

- Weighing plate dimensions W×D×H, steel, painted
- 1500×1250×80 mm



### Bulk pallet load handling, KERN KFU-V20

- Weighing plate dimensions W×D×H, steel, painted
- **G** 840×1300×90 mm

### Quantity platforms KERN KIP-V20

- Weighing plate dimensions W×D×H, stainless steel
- III 1000×1000×108 mm
- 1500×1200×108 mm
- 1500×1500×108 mm
- Connection cable approx.
  A E 2,5 m
  F J 5 m



### Accessories

- 2 Protective working cover, scope of delivery: 5 items, KERN CFS-A02S05, € 40,-
- Internal rechargeable battery pack, operating time up to 60 h without backlight, charging time approx. 12 h, KERN GAB-A04, € 40,-
- If Signal lamp for visual support of weighing with tolerance range, only in combination with, KERN CFS-A03, € 280,-
- If Y-cable for parallel connection of two terminal devices to the RS-232 interface on the scale, e.g. signal lamp and printer, KERN CFS-A04, € 35,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

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Information on other high-capacity bulk balances, such as, for example, pallet scales, drive-through scales or floor scales is available on request, for information on other counting systems with the KERN CFS reference balance (d = 0.1 g), please refer to the website

STANDARD						OPTION	
	mass ∎⇔∎ KCP	<u>.</u>	-√+ ⊙ Ͽゥ -			<b></b> ;	DAkkS
CAL EXT MEMORY RS	S 232 DUAL PROTOCOL	PCS SUM	TOL MULTI	DMS 2 DAYS	4 DAYS	ACCU	+3 DAYS

Model	Weighing capacity	Readability	Weighing	Weighing capacity	Readability	Counting	Smallest part	Price	Option	
	Quantity scale	Quantity scale	plate	Reference scale		resolution	weight	excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]		[Max]	[d]		[Normal]	ex works	DAkkS	
KERN	kg	g		g	g	Points	g/piece	€	KERN	€
CCS 6K-6	6	0,2	A	300	0,001	1.200.000	0,05	600,- 🔮	962-128-127	180,-
CCS 10K-6.	15	0,5	В	300	0,001	3.000.000	0,05	660,-	962-128-127	180,-
CCS 30K0.01.	30	1	С	3000	0,01	600.000	0,5	630,-	962-128-127	180,-
CCS 30K0.1.	30	1	С	6000	0,1	300.000	1	580,-	962-128-128	196,-
CCS 60K0.01.	60	2	С	3000	0,01	1.200.000	0,5	630,-	962-129-127	200,-
CCS 60K0.01L.	60	2	D	3000	0,01	1.200.000	0,5	650,-	962-129-127	200,-
CCS 60K0.1.	60	2	C	6000	0,1	600.000	1	630,-	962-129-128	220,-
CCS 60K0.1L.	60	2	D	6000	0,1	600.000	1	690,-	962-129-128	220,-
CCS 150K0.01	150	5	D	3000	0,01	3.000.000	0,5	730,-	962-129-127	200,-
CCS 150K0.01L	150	5	E	3000	0,01	3.000.000	0,5	970,-	962-129-127	200,-
CCS 150K0.1.	150	5	D	6000	0,1	1.500.000	1	730,-	962-129-128	220,-
CCS 150K0.1L	150	5	E	6000	0,1	1.500.000	1	920,-	962-129-128	220,-
CCS 300K0.01	300	10	E	3000	0,01	6.000.000	0,5	970,-	962-129-127	200,-
CCS 300K0.1	300	10	E	6000	0,1	3.000.000	1	930,-	962-129-128	220,-
CCS 600K-1S*	600	200	Н	6000	0,1	6.000.000	1	1500,-	962-130-127	255,-
CCS 600K-1*	600	200		6000	0,1	6.000.000	1	1880,-	962-130-127	255,-
CCS 600K-2U*	600	200	G	3000	0,01	12.000.000	0,5	1620,-	962-130-127	255,-
CCS 1T-4S*	1500	500	Н	6000	0,1	15.000.000	1	1520,-	962-130-128	270,-
CCS 1T-4*	1500	500	1	6000	0,1	15.000.000	1	1870,-	962-130-128	270,-
CCS 1T-1L*	1500	500	F	6000	0,1	15.000.000	1	2290,-	962-130-128	270,-
CCS 1T-1U*	1500	500	G	6000	0,1	15.000.000	1	1540,-	962-130-128	270,-
CCS 3T-3*	3000	1000		6000	0,1	30.000.000	1	1870,-	962-132-128	550,-
CCS 3T-3L*	3000	1000	J	6000	0,1	30.000.000	1	2130,-	962-132-128	550,-

Price reduction

## KERN IOC Page 95/96

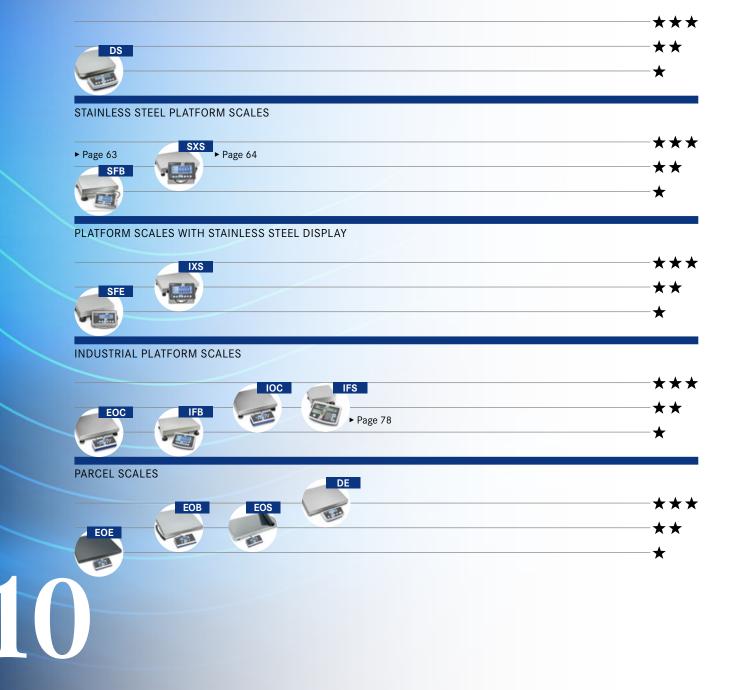
- Industry 4.0: A wide range of (optional) data interfaces allows easy transfer of weighing data
- Integrated KERN Communication Protocol (KCP), ideal for connecting an Merchandise Management or ERP system
- > Compatible with KERN EasyTouch App



# **Parcel scales/Platform scales**

Here you'll find a complete summary of the KERN platform scales series and their positioning within the platform scales segment on the basis of application, price-performance ratio and functional volume

Precision platform scales



## **Quick-Finder Parcel scales/Platform scales**

Readability [d]	Weighing capacity [Max]	Weighing plate W×D×H	Model	Price excl. of VAT ex works	Page	DAYS		ALIBI	• #*** RS 232	KCP PROTOCOL	PCS	IP	BATT	ACCU
g	kg	mm	KERN	€ ex works			For an	explanat	ion on t	he picto	os, see	front fla	р	
0,01	3	228×228×95	DS 3K0.01S	660,-	98	1	•		•		•		-	0
0,05	5	228×228×95	DS 5K0.05S	580,-	98	1	•		•		٠			0
0,05	8	308×318×75	DS 8K0.05	570,-	98	1	٠		٠		٠			0
0,1	3	230×230×110	IFB 3K-4	400,-	97	1	•		•	•	•	•		0
0,1	10	228×228×95	DS 10K0.1S	550,-	98	1	•		•		•	-		0
0,1	16 20	315×308×75 308×318×75	DS 16K0.1	570,-	98 98	1	•		•		•			0
0,1 0,1	30	308×318×75	DS 20K0.1 DS 30K0.1	<u> </u>	98	1								0 0
0,1	30	450×350×115	DS 30K0.1L	840,-	98	1	•				•			0
0,1   0,2	3   6	300×300×110	IOC 6K-4	360,-	95	1	•	0	•					0
0,2	6	230×230×110	IFB 6K-4S	390,-	97	1	•		•	•	٠	٠		0
0,2	6	300×240×110	IFB 6K-4	400,-	97	1	٠		•		•			0
0,2	6	300×240×86	IXS 6K-4	650,-	100	1	•		0		•	•		0
0,2	36	308×318×75	DS 36K0.2	570,-	98	1	۲		•		•			0
0,2	36	450×350×115	DS 36K0.2L	770,-	98	1	•		•	_	•			0
0,2	60	450×350×115	DS 60K0.2	840,-	98 95	1	•		•		•			0
0,2   0,5	6   15 6   15	300×240×110 318×308×88	IOC 10K-4 DE 15K0.2D	<u> </u>	95 91	1	•	0	•		•	•	•	0
0,2   0,5	6   15	300×300×110	EOC 10K-4	350,-	91	1				•				0
0,2   0,5	6   15	400×300×110	IOC 10K-4L	400,-	95	1	•	0			•			0
0,5	6	318×308×75	DE 6K0.5A	230,-	91	1	•		•		•	•	•	0
0,5	6	300×300×110	EOC 6K-4A	330,-	93	1	•		•	٠	•	•		0
0,5	15	300×240×110	IFB 10K-4	360,-	97	1	٠		٠		•	•		0
0,5	15	400×300×128	IFB 10K-4L	420,-	97	1	٠		•	•	٠	•		0
0,5	15	300×240×86	IXS 10K-4	610,-	100	1	٠		0		٠	•		0
0,5	15	400×300×89	IXS 10K-4L	720,-	100	1	•		0		•	•		0
0,5	65	450×350×115	DS 65K0.5	770,-	98	1	•		•		•			0
0,5	100	450×350×115	DS 100K0.5	820,-	98 95	1	•	-	•		•			0
0,5   1 0,5   1	15   30 15   35	400×300×110 318×308×88	IOC 30K-4 DE 35K0.5D	400,- 350,-	95 91	1	•	0			•	•		0
0,5   1	15   35	300×300×110	EOC 30K-4S	350,-	91	1				•	•			0
0,5   1	15   35	500×400×120	EOC 30K-40	380,-	93	1	•		•		•			0
1	10   00	318×308×75	DE 12K1A	230,-	91	1	•		•		•	•	•	0
1	12	300×300×110	EOC 10K-3A	330,-	93	1	•		•	•	•	•		0
1	30	400×300×128	IFB 30K-3	420,-	97	1	•		•	•	•	•		0
1	30	400×300×89	IXS 30K-3	720,-	100	1	٠		0		•	•		0
1	30	500×400×123	IXS 30K-3L	850,-	100	1	•		0			•		0
1	150	450×350×115	DS 150K1	820,-	98	1	۲		•		•			C
2	3   6	318×308×75	DE 6K1D	200,-	91	1	•		•		•	•	•	0
2	3   6	300×300×110	EOC 6K-3	310,-	93	1	•		•	•	•	•		0
2	3   6	300×300×110 300×240×110	IOC 6K-3M IFB 6K1DM	330,- 380,-	95 97	1	0 • 0 •	0	•		•			0
2	3 6	230×230×110	IFB 6K-3SM	400,-	97	1	0				•			0
2	3 6	300×240×86	IXS 6K-3M	610,-	100	1	0		0		•	•		0
2	30   60	318×308×88	DE 60K1D	350,-	91	1	•		•	-	•	•	•	0
2	30   60	400×300×110	IOC 60K-3	410,-	95	1	•	0	•	•	•			C
2	30   60	500×400×120	IOC 60K-3L	490,-	95	1	•	0	•	•	•	•		C
2	30   60	522×406×98	DE 60K1DL	450,-	91	1	۲		•		٠	•	•	C
2	30   60	300×300×110	EOC 60K-3	350,-	93	1	•			•	•	•		C
2	30   60	500×400×120	EOC 60K-3L	380,-	93	1	•		•			•		0
2	6	300×240×110	SFE 6K-3NM	430,-	99	1	0		-		-	•		
2	24	318×308×75	DE 24K2A	230,-	91	1	•		•	_			•	C
2	24 60	300×300×110 400×300×128	EOC 20K-3A IFB 60K-3	<u> </u>	93 97	1	•		•	•	•	•		C
2	60	500×400×130	IFB 60K-3L	420,-	97	1			•					
2	60	400×300×89	IXS 60K-3L	640,-	100	1	•		0		•	•		
2	60	500×400×123	IXS 60K-3L	850,-	100	1	•		0		•	•		-
5	6   15	318×308×75	DE 15K2D	200,-	91	1	•		•		٠	•	•	(
5	6   12	300×300×110	EOC 10K-3	310,-	93	1	•		۲	۲	٠	٠		0
5	6   15	300×240×110	IOC 10K-3M	305,-	95	1	0 •	0	•			•		(
5	6   15	400×300×110	IOC 10K-3LM	370,-	95	1	0	0	•	•	•	•	-	(
5	6   15	300×240×110	IFB 15K2DM	380,-	97	1	0		•	•	•	•		0
5	6   15	400×300×128	IFB 15K2DLM	480,-	97	1	0		•		•	•		
5	6   15	300×240×86	IXS 10K-3M	650,-	100	1	0		0		•	•		
5  5	6   15 60   150	400×300×89 318×308×88	IXS 10K-3LM DE 150K2D	720,- 355,-	100 91	1	•		•		•	•	•	
5	60   150	318×308×88 300×300×110	EOC 100K-3	<u> </u>	91	1			•	•				
5	60   150	500×300×110	IOC 100K-3	500,-	95	1		0			•			
5	60   150	522×406×98	DE 150K2DL	450,-	91	1	•	<b>•</b>	•		•	•	•	0
2   5	60   150	500×400×120	EOC 100K-3L	380,-	93	1	•		•	•	•	•		0
				,	. •				-	-	-			

## **Quick-Finder Parcel scales/Platform scales**

eadability 1]	Weighing capacity [Max]	Weighing plate W×D×H	Model	Price excl. of VAT ex works	Page	DAYS	M	CAL EXT	ALIBI	RS 232	KCP PROTOCOL	PCS	IP	BATT	A
	kg	mm	KERN	€			Fo	or an ex	planati	on on t	he picto	os, see	front fla	ар	
5	60   150	650×500×150	IOC 100K-3L	650,-	95	1		•	0	•					(
5	15	315×305×57	EOE 10K-3	155,-	88	1		•						•	
5	15	315×305×57	EOB 15K5	170,-	89	1		٠						•	
5	15	300×240×110	SFE 10K-3NM	420,-	99	1	0	٠					•		
5	15	400×300×130	SFE 10K-3LNM	490,-	99	1	0	٠					•		
	60	318×308×75	DE 60K5A	230,-	91	1		•		•			•	•	
	60	300×300×110	EOC 60K-3A	330,-	93	1		٠		•	•	•	•		
	150	500×400×130	IFB 100K-3	560,-	97	1		٠		•	•	•	•		
	150	650×500×142	IFB 100K-3L	800,-	97	1		٠		•	•	•	•		
	150	500×400×123	IXS 100K-3	850,-	100	1		•		0		•	•		
	150	650×500×133,5	IXS 100K-3L	960,-	100	2*		•		0		•	•		
10	15   35	318×308×75	DE 35K5D	200,-	91	1		٠		•		•	•	•	
10	15   35	522×403×83	DE 35K5DL	330,-	91	1		•		•		•	•	•	
10	15   35	300×300×110	EOC 30K-3	320,-	93	1		٠				•	•		
10	15   35	500×400×120	EOC 30K-3L	370,-	93	1		•		•	•	•	•		
10	15   30	400×300×110	IOC 30K-3M	370,-	95	1	0	•	0	•			•		
10	15   30	400×300×128	IFB 30K5DM	420,-	97	1	0	•		•	•	•	•		
10	15   30	400×300×89	IXS 30K-2M	720,-	100	1	0	٠		0		•	٠		
10	15   30	500×400×123	IXS 30K-2LM	850,-	100	1	0	٠		0		٠	٠		
10	150   300	522×406×98	DE 300K5DL	450,-	91	1		٠		٠		٠	٠	•	
10	150   300	500×400×120	EOC 300K-3	380,-	93	1		۲		•	٠	٠	٠		
10	150   300	650×500×150	IOC 300K-3	680,-	95	1			0		•				
)	30	300×240×110	SFE 30K-2NM	430,-	99	1	0	۲					•		
1	35	315×305×57	EOE 30K-2	155,-	88	1		۲						•	
)	35	315×305×57	EOB 35K10	170,-	89	1		٠						•	
)	120	318×308×75	DE 120K10A	230,-	91	1		•		•		•	•	•	
)	120	500×400×120	EOC 100K-2A	370,-	93	1		•		•	•	•	•		
)	300	650×500×142	IFB 300K-2	800,-	97	1		•		•	•	•	•		
)	300	650×500×133,5	IXS 300K-2	980,-	100	2*		•		0		•	•		
20	30   60	318×308×75	DE 60K10D	200,-	91	1		٠		•		•	•	•	
20	30   60	522×403×83	DE 60K10DL	330,-	91	1		•		•		•	•	•	
20	30   60	300×300×110	EOC 60K-2	320,-	93	1		•		•		•	•		
20	30   60	500×400×120	EOC 60K-2L	370,-	93	1		•		•	•	•	•		
)   20	30   60	400×300×110	IOC 60K-2M	380,-	95	1	0	•	0	•	•	•	•		
20	30   60	500×400×120	IOC 60K-2LM	475,-	95	1	0	•	0	•	•	•	•		
)   20	30   60	400×300×128	IFB 60K10DM	440,-	97	1	0	•		•	•	•	•		
)   20	30   60	500×400×130	IFB 60K10DLM	570,-	97	1	0	•				•	•		
0   20	30   60	400×300×89	IXS 60K-2M	720,-	100	1	0	•		0		•	•		
)   20	30   60	500×400×123	IXS 60K-2LM	850,-	100	1	0	•		0					
)   20	300   600	800×600×200	IOC 600K-2	830,-	95	2*		•	0						
)	60	315×305×57	EOE 60K-2	155,-	88	1			<u> </u>						
)	60	550×550×58	EOE 60K-2L	290,-	88	1		•							
)	60	315×305×57	EOB 60K20	170,-	89	1		•							
)	60	550×550×58	EOB 60K20	350,-	89	1									
)	60	400×300×130	SFE 60K-2NM	480,-	99	1	0								
)	60	500×400×140		/	99	1	-0	•							
	600	800×600×200	SFE 60K-2LNM	570,-	99	2*									
0   50		318×308×75	IFB 600K-2 DE 150K20D	1000,-						•	•	•		-	
	60   150	522×403×83		210,-	91	1		•							
50	60   150		DE 150K20DL	330,-	91	1		•		•		•	•		
50	60   150	650×500×89	DE 150K20DXL	465,-	91			-		•	-				
50	60   150	300×300×110	EOC 100K-2	320,-	93	1		•		•		•	•		
50	60   150	500×400×120	EOC 100K-2L	370,-	93	1		• •				-			
50	60   150	600×500×150	EOC 100K-2XL	510,-	93	1		•		-	•	-			
50	60   150	950×500×60	EOC 100K-2XXL	550,-	93	1		•		•	•	•	•		
50	60   150	500×400×120	IOC 100K-2M	475,-	95	1	0	•	0	•	•	•	•		
50	60   150	650×500×150	IOC 100K-2LM	630,-	95	1	0	•	0	•	•	•	•		
50	60   150	500×400×130	IFB 150K20DM	560,-	97	1	0	•		•	•	•	•		
50	60   150	650×500×142	IFB 150K20DLM	730,-	97	1	0	•		•	•	•	•		
50	60   150	500×400×123	IXS 100K-2M	850,-	100	1	0	•		0		•	•		
50	60   150	650×500×133,5	IXS 100K-2LM	990,-	100	2*	0	•		0		•	•		
	150	315×305×57	EOE 100K-2	155,-	88	1		•			-		-	-	
	150	550×550×58	EOE 150K50L	290,-	88	1		•						•	
	150	950×500×58	EOE 150K50XL	330,-	88	1		٠						•	
)	150	315×305×57	EOB 150K50	170,-	89	1		•				-		•	
)	150	550×550×58	EOB 150K50L	350,-	89	1		•						•	
)	150	950×500×58	EOB 150K50XL	420,-	89	1		•				-		•	
)	150	950×500×58	EOS 150K50XL	435,-	90	1		•						•	
)	150	400×300×130	SFE 100K-2NM	490,-	99	1	0	٠					٠		
<u> </u>	150	500×400×140	SFE 100K-2LNM	560,-	99	1	0	٠							
)							0								

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86 Parcel scales/Platform scales

## **Quick-Finder Parcel scales/Platform scales**

Readability [d]	Weighing capacity [Max]	Weighing plate W×D×H	Model	Price excl. of VAT ex works	Page	DAYS	Μ	CAL EXT	ALIBI	RS 232	KCP PROTOCOL	PCS	¢¢¢ IP	BATT	ACCU
g	kg	mm	KERN	€			F	or an e	kplanat	ion on t	he pict	os, see	front fla	ар	
50   100	150   300	522×403×83	DE 300K50D	330,-	91	1		•		•		•	•	•	0
50   100	150   300	650×500×95	DE 300K50DL	465,-	91	1		٠		•		•	•	•	0
50   100	150   300	500×400×120	EOC 300K-2	370,-	93	1		٠		•	•	•	•		0
50   100	150   300	600×500×150	EOC 300K-2L	510,-	93	1		•				•	•		0
50   100	150   300	650×500×150	IOC 300K-2M	660,-	95	1	0	۲	0	۲	٠	٠	•		0
50   100	150   300	650×500×142	IFB 300K50DM	740,-	97	1	0	•				•	•		0
50   100	150   300	650×500×133,5	IXS 300K-2M	990,-	100	2*	0	۲		0		•	•		0
100	300	315×305×57	EOE 300K100	155,-	88	1		•						•	
100	300	550×550×58	EOE 300K100L	290,-	88	1		۲						•	
100	300	950×500×58	EOE 300K100XL	330,-	88	1		۲						•	
100	300	315×305×57	EOB 300K100A	170,-	89	1		۲						•	
100	300	550×550×58	EOB 300K100L	350,-	89	1		۲						•	
100	300	950×500×58	EOB 300K100XL	420,-	89	1		۲						•	
100	300	950×500×58	EOS 300K100XL	435,-	90	1		۲						•	
100	300	650×500×140	SFE 300K-1LNM	710,-	99	1	0	۲					•		•
100   200	300   600	800×600×200	IOC 600K-1M	800,-	95	2*	0	۲	0	٠	٠	٠	•		0
100   200	300   600	800×600×200	IFB 600K-1M	1060,-	97	2*	0	۲				•	•		0
News 2022		* Shipmen	t via freight forwarder	. Please ask fo	r dimens	ions, gr	oss wei	ght, ship	oping c	osts		•	= standa	ard O	= option



Parcel scales with big platform for fast and easy weighing in the office, production, dispatch etc.

### Features

- High mobility: thanks to battery operation, compact, lightweight construction, it is suitable for the use in several locations
- Wall mount for display device, standard
- 10 Hold function: When the weighing conditions are unstable, a stable weight is calculated determining an average value

### **Technical data**

- Large LCD display, digit height 25 mm
- Weighing plate dimensions, steel, painted  $\ensuremath{\mathsf{W}}^\times\ensuremath{\mathsf{D}}^\times\ensuremath{\mathsf{H}}$
- A 315×305×57 mm
- 550×550×58 mm, see larger picture
   950×550×58 mm
- Dimensions of display device W×D×H 235×114×51 mm
- Cable length display device, spiral cable, approx. 0.7 – 2 m
- Optional battery operation, 4×1.5 V AA not included in scope of delivery, operating time up to 100 h
- Permissible ambient temperature 5 °C/35 °C

### Accessories

- Protective working cover over the display device, scope of delivery: 5 items, KERN EOB-A04BS05, € 40,-
- Stand to elevate display device, for models with weighing plate size , column height approx. 480 mm KERN EOB-A01N, € 60,-
- Stand to elevate display device, height of stand approx. 1000 mm, can be reordered, KERN EOB-A02B, € 105,-
- External universal mains adapter, with universal input and optional input socket adapters for EU, GB, USA, KERN YKA-16, € 40,-
- Non-slip rubber mat W×D×H 945×505×5 mm, KERN EOE-A01, € 45,-

STANDARD		 		OPTION
	BATT	DMS	1 DAY	DAkkS +3 DAYS

Model	Weighing	Readability	Reproducibility	Weighing plate	Net weight	Price	Option	
	capacity					excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]			approx.	ex works	DAkkS	
KERN	kg	g	g		kg	€	KERN	€
EOE 10K-3	15	5	5	A	4,0	155,-	963-128	99,-
EOE 30K-2	35	10	10	A	4,0	155,-	963-128	99,-
EOE 60K-2	60	20	20	A	3,8	155,-	963-129	122,-
EOE 60K-2L	60	20	20	В	14	290,-	963-129	122,-
EOE 100K-2	150	50	50	A	4	155,-	963-129	122,-
EOE 150K50L	150	50	50	В	14	290,-	963-129	122,-
EOE 150K50XL	150	50	50	C	18	330,-	963-129	122,-
EOE 300K100	300	100	100	A	3,6	155,-	963-129	122,-
EOE 300K100L	300	100	100	В	14	290,-	963-129	122,-
EOE 300K 100XL	300	100	100	C	18	330,-	963-129	122,-



Allround parcel scale with robust stainless steel weighing plate – also with XL platform and large weighing ranges

### Features

- Weighing plate stainless steel, painted steel base
- Simple and convenient 4-key operation
- Wall mount for display device, standard
- Hold function: When the weighing conditions are unstable, a stable weight is calculated determining an average value
- · Protective working cover included with delivery
- Universal external mains adapter included with delivery

### **Technical data**

- Large LCD display, digit height 25 mm
- Weighing plate dimensions, stainless steel  $W{\times}D{\times}H$
- A 315×305×57 mm
- 550×550×58 mm, see larger picture
   950×500×58 mm
- Dimensions of display device W×D×H 235×114×51 mm
- Cable length of display device approx. 1,8 m
- Optional battery operation, 4×1.5 V AA not included in scope of delivery, operating time up to 60 h
- Permissible ambient temperature 5  $^{\circ}\text{C}/35$   $^{\circ}\text{C}$

### Accessories

- Protective working cover over the display device, scope of delivery: 5 items, KERN EOB-A04BS05, € 40,-
- ■ Stand to elevate display device, height of stand approx. 1000 mm, can be reordered, KERN EOB-A02B, € 105,-

- Stand to elevate display device Column height approx. 480 mm,
- KERN EOB-A01N, **€ 60,-**
- Non-slip rubber mat W×D×H 945×505×5 mm, KERN EOE-A01, € 45,-

STANDARD							OPTION
	$\mathcal{C}$	^		ВШ			DAkkS
CAL EXT	UNIT	MOVE	BATT	MULTI	DMS	1 DAY	+3 DAYS

Model	Weighing	Readability	Reproducibility	Linearity	Net weight	Weighing plate	Price	Option	
	capacity						excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]			approx.		ex works	DAkkS	
KERN	kg	g	g	g	kg		€	KERN	€
EOB 15K5	15	5	5	± 10	3,8	А	170,-	963-128	99,-
EOB 35K10	35	10	10	± 20	3,8	A	170,-	963-128	99,-
EOB 60K20	60	20	20	± 40	3,8	А	170,-	963-129	122,-
EOB 60K20L	60	20	20	± 40	15	В	350,-	963-129	122,-
EOB 150K50	150	50	50	± 100	3,8	А	170,-	963-129	122,-
EOB 150K50L	150	50	50	± 100	11	В	350,-	963-129	122,-
EOB 150K50XL	150	50	50	± 100	17	C	420,-	963-129	122,-
EOB 300K100A	300	100	100	± 200	4,6	А	170,-	963-129	122,-
EOB 300K100L	300	100	100	± 200	14	В	350,-	963-129	122,-
EOB 300K100XL	300	100	100	± 200	19	C	420,-	963-129	122,-

### Parcel scale KERN EOS









# Heavy duty parcel and veterinary platform scale with extra large stainless steel weighing plate

### Features

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- Weighing plate stainless steel, painted steel base
- Simple and convenient 4-key operation
- Wall mount for display device, standard
- Hold function: When the weighing conditions are unstable, a stable weight is calculated determining an average value: The scale can be easily transported using rollers and a handle and does not require much storage space
- • Protective working cover included with delivery: Non-slip rubber mat included with delivery
- Universal external mains adapter included with delivery

### **Technical data**

- Large LCD display, digit height 25 mm
- Weighing plate dimensions, stainless steel W×D×H, 950×500×58 mm
- Dimensions of display device W×D×H 235×114×51 mm
- Cable length of display device approx. 2,7 m (Spiral cable)
- Optional battery operation, 4×1.5 V AA not included in scope of delivery, operating time up to 60 h
- Permissible ambient temperature 5 °C/35 °C

### Accessories

- Protective working cover over the display device, scope of delivery: 5 items, KERN EOB-A04BS05, € 40,-
- ■ Stand to elevate display device, height of stand approx. 1000 mm, can be reordered, KERN EOB-A02B, € 105,-
- Non-slip rubber mat W×D×H
   950×500×5 mm, KERN EOE-A01, € 45,-

STANDARD	OPTION	
		DAkks

Model	Weighing	Readability	Reproducibility	Linearity	Net weight	Price	Option	
	capacity					excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]			approx.	ex works	DAkkS	
KERN	kg	g	g	g	kg	€	KERN	€
EOS 150K50XL	150	50	50	± 100	17	435,-	963-129	122,-
EOS 300K100XL	300	100	100	± 200	17	435,-	963-129	122,-



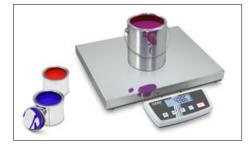
The long lasting story of success with dust and spray protected display device



Piece counting



Animal weighing



Recipe-weighing

### Parcel scale KERN DE-D



### Features

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- High mobility: thanks to battery operation/ rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations (production, warehouse, dispatch department etc.)
- Display device flexible positioning e.g. free-standing or screwed to the wall
- Display device: Plastics, protection against dust and water splashes IP65
- Weighing plate stainless steel, painted steel base
- PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels
- With the recipe function you can weigh the different ingredients of a mixture. As a check, you can also call up the total weight of all the ingredients
- Freely programmable weighing unit, e.g. display direct in special units such as length of thread g/m, paper weight  $g/m^2$ , or similar



Protective working cover included with delivery

### **Technical data**

- Large backlit LCD display, digit height 25 mm
- Weighing plate dimensions, stainless steel
- **W**×D×H
- A 318×308×75 mm
- B 318×308×88 mm
- 522×406×98 mm, see larger picture
- D 522×403×83 mm
- 650×500×89 mm
- Dimensions of display device, W×D×H 225×110×45 mm
- Optional battery operation, 9 V block not included in scope of delivery, operating time up to 12 h
- Permissible ambient temperature 5 °C/35 °C



### Accessories

- Protective working cover over the display device, scope of delivery: 5 items, KERN DE-A12S05, € 40,-
- Internal rechargeable battery pack, operating time up to 30 h without backlight, charging time approx. 10 h, KERN NDE-A02, € 55,-
- Mount to fasten the display device to the platform, for models with weighing plate size B, C, can be reordered, KERN DE-A11N, € 40,-
- Wall mount for display device, KERN DE-A13, € 30,-
- 2 Stand to elevate display device, height of stand approx. 480 mm, can be reordered, KERN DE-A10, € 120,-
- Individual header data: the free software SHM-01 can be used to print header lines on the printout when using printers YKN-01 and YKB-01N
- Further details, plenty of further accessories and suitable printers see Accessories



Model	Weighing	Readability	Reproduci-	Linearity	Smallest part	Cable length	Net weight	Weighing		Option	
	capacity		bility		weight			plate	excl. of VAT	DAkkS Calibr. Co	ertificate
	[Max]	[d]			[Normal]	approx.	approx.		ex works	DAkkS	
KERN	kg	g	g	g	g/piece	m	kg		€	KERN	€
	Du	ual-range bala	nce switches a	automatically	to the next larg	est weighing o	apacity [Max]	and read	ibility [d]		
DE 6K1D	3   6	1   2	1   2	±3 6	40	1,4	4,8	A	200,-	963-128	99,-
DE 15K2D	6   15	2   5	2   5	± 6   15	100	1,4	4,8	A	200,-	963-128	99,-
DE 35K5D	15   35	5   10	5   10	± 15   30	100	1,4	4,8	A	200,-	963-128	99,-
DE 35K5DL	15   35	5   10	5   10	± 15   30	100	1,4	16	D	330,-	963-128	99,-
DE 60K10D	30   60	10   20	10   20	± 30   60	200	1,4	4,8	A	200,-	963-129	122,-
DE 60K10DL	30   60	10   20	10   20	± 30   60	200	1,4	16	D	330,-	963-129	122,-
DE 150K20D	60   150	20   50	20   50	± 60   150	400	1,5	5	A	210,-	963-129	122,-
DE 150K20DL	60   150	20   50	20   50	± 60   150	400	1,5	16	D	330,-	963-129	122,-
DE 150K20DXL	60   150	20   50	20   50	± 60   150	400	1,4	28	E	465,-	963-129	122,-
DE 300K50D	150   300	50   100	50   100	± 150   300	2000	1,25	16	D	330,-	963-129	122,-
DE 300K50DL	150   300	50   100	50   100	± 150   300	2000	1,05	28	E	465,-	963-129	122,-
DE 6K0.5A	6	0,5	0,5	± 1,5	10	1,4	4,8	A	230,-	963-128	99,-
DE 12K1A	12	1	1	± 3	20	1,4	4,8	A	230,-	963-128	99,-
DE 24K2A	24	2	2	± 6	40	1,4	4,8	A	230,-	963-128	99,-
DE 60K5A	60	5	5	± 15	100	1,4	4,8	A	230,-	963-129	122,-
DE 120K10A	120	10	10	± 30	200	1,4	5,0	A	230,-	963-129	122,-
			Dua	al-range balan	ce with high re	solution reada	bility				
DE 15K0.2D	6   15	0,2   0,5	0,2   0,5	± 0,8   2	4	1	4	В	350,-	963-128	99,-
DE 35K0.5D	15   35	0,5   1	0,5   1	±2 4	10	1	7	В	350,-	963-128	99,-
DE 60K1D	30   60	1   2	1   2	±4 8	20	1,47	7	В	350,-	963-129	122,-
DE 60K1DL	30   60	1   2	1   2	±4 8	20	1,4	15	С	450,-	963-129	122,-
DE 150K2D	60   150	2   5	2   5	± 8   20	40	1,6	7	В	355,-	963-129	122,-
DE 150K2DL	60   150	2   5	2   5	± 8   20	40	1,4	15	С	450,-	963-129	122,-
DE 300K5DL	150   300	5   10	5   10	± 20   40	100	1,4	15	С	450,-	963-129	122,-



Robust and high-resolution platform scale with practical Flip/Flop display device for greatest ease of use



Weighing instead of counting! Because the counting function is so easy to use, you can rapidly record large numbers of small parts – which saves time and money



Practical Flip/Flop display device: flexible positioning e.g. free-standing or screwed to the wall (optional). By rotating the upper housing shell you can determine the angle of the display as well as the cable outlet.

Conversion of the display device, Factory Option for an additional cost, delivery time + 2 working days, KERN KIB-M01, see Accessories on the right, please indicate when placing your order

### Industrial platform scale KERN EOC



### Features

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- High mobility: thanks to rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations (laboratory, production, quality control, commissioning etc.)
- II Platform: weighing plate stainless steel, painted steel base, silicone-coated aluminium load cell, protection against dust and water splashes IP65. Level indicator and levelling feet for precise levelling of the scale, fitted as standard, to give the most accurate weighing result
- Weighing with tolerance range (checkweighing): a visual and audible signal helps with portioning, dispensing or grading
- Hold function: When the weighing conditions are unstable, a stable weight is calculated determining an average value
- Benchtop stand incl. wall mount for display device as standard
- Protective working cover included with delivery



• Searching and remote control of the balance using external control devices or computers with the KERN Communication Protocol (KCP). KCP is a standardised interface command structure for KERN balances and other instruments which allows you to recall and manage all relevant parameters and device functions. You can therefore simply connect KERN devices with KCP to computers, industrial control systems and other digital systems. In a large number of cases the KCP is compatible with the MT-SICS protocol.

### **Technical data**

- Large backlit LCD display, digit height 25 mm
- Weighing plate dimensions W×D×H
  300×300×110 mm
  500×400×120 mm, see larger picture
- 600×500×150 mm
- 950×500×60 mm
- Dimensions of display device W×D×H 268×115×80 mm
- Permissible ambient temperature -10 °C/40 °C



### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN EOC-A01S05, € 40,-
- Internal rechargable battery pack, operating time up to 43 h without backlight, charging time approx. 3 h, KERN KFB-A01, € 35,-
- Stand to elevate display device, height of stand approx. 330 mm,
- KERN EOC-A05, **€ 60,-**
- ■ Mount to fasten the display device to the platform, KERN EOC-A03, € 30,-
- Benchtop stand incl. wall mount for display device, KERN EOC-A04, € 30,-
- Conversion of the display device, to move the cable outlet to the front of the display device, ideal e.g. for subsequent wall installation of the display device (standard configuration ex works: rear outlet), Factory Option, delivery time + 2 working days, KERN KIB-M01, € 95,-

STANDARD	)												OPTION	
CAL EXT	RS 232	KCP PROTOCOL	GLP PRINTER	PCS	SUM	% PERCENT	-√+ ⊙ ৢ৽ TOL	MOVE	<b>000</b> IP 65	A H MULTI	DMS	1 DAY	ACCU	DAkks +3 days
									4					

Model	Weighing	Readability	Smallest part	Cable length	Net weight	Weighing plate	Price	Option	1
	capacity	_	weight	_	_		excl. of VAT	DAkkS Calibr. C	ertificate
	[Max]	[d]	[Normal]	approx.	approx.		ex works	DAkkS	
KERN	kg	g	g/piece	m	kg		€	KERN	€
EOC 6K-3	3   6	1   2	2,5	3	6	A	310,-	963-128	99,-
EOC 10K-3	6   12	2   5	5	3	7	A	310,-	963-128	99,-
EOC 30K-3	15   35	5   10	10	3	6	A	320,-	963-128	99,-
EOC 30K-3L	15   35	5   10	10	3	9	В	370,-	963-128	99,-
EOC 60K-2	30   60	10   20	20	3	6	A	320,-	963-129	122,-
EOC 60K-2L	30   60	10   20	20	3	9	В	370,-	963-129	122,-
EOC 100K-2	60   150	20   50	50	3	6	A	320,-	963-129	122,-
EOC 100K-2L	60   150	20   50	50	3	9	В	370,-	963-129	122,-
EOC 100K-2XL	60   150	20   50	50	3	19	C	510,-	963-129	122,-
EOC 100K-2XXL	60   150	20   50	100	0,7 - 2,7	26	D	550,-	963-129	122,-
EOC 300K-2	150   300	50   100	100	3	9	В	370,-	963-129	122,-
EOC 300K-2L	150   300	50   100	100	3	19	C	510,-	963-129	122,-
EOC 6K-4A	6	0,5	2,5	3	6	A	330,-	963-128	99,-
EOC 10K-3A	12	1	5	3	7	A	330,-	963-128	99,-
EOC 20K-3A	24	2	10	3	6	A	330,-	963-128	99,-
EOC 60K-3A	60	5	20	3	6	A	330,-	963-129	122,-
EOC 100K-2A	120	10	50	3	9	В	370,-	963-129	122,-
	Dual-rar	nge balance switcl	hes automatically	to the next larges	t weighing capac	ty [Max] and read	ibility [d]		
EOC 10K-4	6   15	0,2   0,5	5	3	7	A	350,-	963-128	99,-
EOC 30K-4S	15   35	0,5   1	10	3	9	A	350,-	963-128	99,-
EOC 30K-4	15   35	0,5   1	10	3	9	В	380,-	963-128	99,-
EOC 60K-3	30   60	1   2	20	3	6	A	350,-	963-129	122,-
EOC 60K-3L	30   60	1   2	20	3	9	В	380,-	963-129	122,-
EOC 100K-3	60   150	2   5	50	3	7	A	350,-	963-129	122,-
EOC 100K-3L	60   150	2   5	50	3	9	В	380,-	963-129	122,-
EOC 300K-3	150   300	5   10	100	3	9	В	380,-	963-129	122,-





Allround platform scale with a wide range of communication options and EC type approval [M] – now also available as high-resolution version with fine display



 Verification plug, for verified balances this enables you to separate the display device and platform without affecting the verification, e.g. for installing the scale in a packing and dispatch table, pit frame etc. at a later date. Please order this at the same time as you purchase your scale, see accessories



Practical Flip/Flop display device: flexible positioning e.g. free-standing or screwed to the wall (optional). By rotating the upper housing shell you can determine the angle of the display as well as the cable outlet.

Conversion of the display device, Factory Option for an additional cost, delivery time + 2 working days, KERN KIB-M01, see Accessories on the right, please indicate when placing your order

### Industrial platform scale KERN IOC

### Features

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- Industry 4.0: A wide range of (optional) data interfaces allows that it is easy to transfer weighing data to tablets, laptops, PCs, networks, Smartphones, printers, etc.
- High mobility: thanks to rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations (laboratory, production, quality control, commissioning etc.)
- Platform: weighing plate stainless steel, painted steel base, silicone-coated aluminium load cell, protection against dust and water splashes IP65
- Level indicator and levelling feet for precise levelling of the scale, fitted as standard, to give the most accurate weighing result
- Searching and remote control of the balance using external control devices or computers with the KERN Communication Protocol (KCP). KCP is a standardised interface command structure for KERN balances and other instruments which allows you to recall and manage all relevant parameters and device functions. You can therefore simply connect KERN devices with KCP to computers, industrial control systems and other digital systems. In a large number of cases the KCP is compatible with the MT-SICS protocol.

### **Technical data**

- Large LCD display, digit height 25 mm
- Weighing plate dimensions W×D×H
  - A 300×240×110 mm
- 300×300×110 mm
- C 400×300×110 mm
- 500×400×120 mm, see larger picture
- 650×500×150 mm
- B00×600×200 mm
   Dimensions of display device W×D×H 268×115×80 mm
- Permissible ambient temperature -10 °C/40 °C

### Accessories

- Protective working cover, scope of delivery: 5 items, KERN EOC-A01S05, € 40,-
- Stand to elevate display device, height of stand approx. 330 mm, KERN EOC-A05, € 60,-
- Mount to fasten the display device to the platform, can be retrofitted,
   KERN EOC-A03, € 30, Benchtop stand incl. wall mount for display device, KERN EOC-A04, € 30,-
- Internal rechargeable battery pack, operating time up to 26 h with backlight, charging time approx. 3 h, KERN KFB-A01, € 35,-
- USB data interface, for transferring weighing to the PC, printer etc., KERN KIB-A03, € 120,-
- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, not possible in combination with verification, KERN KIB-A04, € 110,-
- WiFi interface for wireless connection of the balance to networks and WiFi capable devices, such as tablets, laptops or smartphones, continuous data transfer, must be ordered at purchase, KERN KIB-A10, € 120,-

- Ethernet data interface, must be ordered at purchase, KERN KIB-A02, € 150,-
- Alibi memory, including USB interface for exporting weighing results to external data storage media, such as, for example, USB sticks, hard drives, etc., KERN KIB-A01, € 150,-
- Signal lamp, including interface, for visual support of weighing with tolerance range, must be ordered at purchase, KERN KIB-A06, € **390**,-
- Verification plug, please order this at the same time as you purchase your scale, KERN KIB-A12, € 150,-
- Conversion of the display device, Factory Option, delivery time + 2 working days, KERN KIB-M01, € 95,-
- Note: In addition to the RS 232 data interface integrated as standard, only one further data interface can be fitted and operated

STANDARD	OPTION	FACTORY
Image: CALEXT     RS 232     PROTOCOL     PRINTER     PCS     SUM     PERCENT     TOL     MOVE     IP 65     MULTI     DMS     1 DAY	ET ACCU DAkkS	ALIBI USB BT 4.0 WIFI LAN +3 DAYS

Model	Weighing	Readability	Verification	Minimal load	Weighing plate	Price		(	Option	
	capacity		value			excl. of VAT	Verification		DAkkS Calibr. Certificate	
	[Max]	[d]	[e]	[Min]		ex works	MIII		DAkkS	
KERN	kg	g	g	g		€	KERN	€	KERN	€
	Dual-ra	nge balance swit	ches automatical	lly to the next lar	gest weighing ca	pacity [Max] a	nd readibility	/ [d]		
IOC 6K-4 🔤	3   6	0,1   0,2	-	-	В	360,-	-	-	963-128	99,-
IOC 10K-4 🔤	6   15	0,2   0,5	-	-	А	330,-	-	-	963-128	99,-
IOC 10K-4L	6   15	0,2   0,5	-	-	C	400,-	-	-	963-128	99,-
IOC 30K-4	15   30	0,5   1	-	-	C	400,-	-	-	963-128	99,-
IOC 60K-3	30   60	1   2	-	-	C	410,-	-	-	963-129	122,-
IOC 60K-3L	30   60	1   2	-	-	D	490,-	-	-	963-129	122,-
IOC 100K-3	60   150	2   5	-	-	D	500,-	-	-	963-129	122,-
IOC 100K-3L	60   150	2   5	-	-	E	650,-	-	-	963-129	122,-
IOC 300K-3	150   300	5   10	-	-	E	680,-	-	-	963-129	122,-
IOC 600K-2	300   600	10   20	-	-	F	830,-	-	-	963-130	173,-
IOC 6K-3M	3   6	1   2	1   2	20   40	В	330,-	965-228	70,-	963-128	99,-
IOC 10K-3M	6   15	2   5	2   5	40   100	A	305,-	965-228	70,-	963-128	99,-
IOC 10K-3LM	6   15	2   5	2   5	40   100	C	370,-	965-228	70,-	963-128	99,-
IOC 30K-3M	15   30	5   10	5   10	100   200	C	370,-	965-228	70,-	963-128	99,-
IOC 60K-2M	30   60	10   20	10   20	200   400	C	380,-	965-229	93,-	963-129	122,-
IOC 60K-2LM	30   60	10   20	10   20	200   400	D	475,-	965-229	93,-	963-129	122,-
IOC 100K-2M	60   150	20   50	20   50	400   1000	D	475,-	965-229	93,-	963-129	122,-
IOC 100K-2LM	60   150	20   50	20   50	400   1000	E	630,-	965-229	93,-	963-129	122,-
IOC 300K-2M	150   300	50   100	50   100	1000   2000	E	660,-	965-229	93,-	963-129	122,-
IOC 600K-1M	300   600	100   200	100   200	2000   4000	F	800,-	965-230	132,-	963-130	173,-



# High-resolution industrial scale in heavy version with EC type approval [M], now also up to [Max] 600 kg

### Features

- Tough industry standard suitable for use in harsh industrial applications
- II Platform: weighing plate stainless steel, painted steel base, silicone-coated aluminium load cell, protection against dust and water splashes IP65
- Benchtop stand incl. wall mount for display device as standard
- Protective working cover included with delivery

### Technical data

- Large backlit LCD display, digit height 52 mm
- Weighing plate dimensions, stainless steel W×D×H
- 230×230×110 mm, 3 300×240×110 mm
   400×300×128 mm, 5 500×400×130 mm
   650×500×142 mm, 3 800×600×200 mm
- Dimensions of display device W×D×H
  230×230×360 mm
- Cable length of display device approx. 3 m
- Permissible ambient temperature -10 °C/40 °C





### Accessories

- Protective working cover, scope of delivery: 5 items, KERN KFB-A02S05, € 40,-
- Stand to elevate display device, for models with weighing plate size

III-II: Height of stand approx. 330 mm, KERN IFB-A01, € 60,-

D-E: 2 Height of stand approx. 600 mm, KERN IFB-A02, € 70,-

- III-III: Height of stand approx. 800 mm, Stand to elevate display device Column KERN BFS-A07, € 140,-
- Internal rechargeable battery pack, operating time up to 35 h, without backlight, charging time approx. 12 h, must be ordered at purchase, KERN KFB-A01, € **35**,-
- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, not in combination with verification, KERN KFB-A03, € 135,-
- Analogue module, must be ordered at purchase, not possible in combination with signal lamp 0-10 V: KERN KFB-A04, € 100, 4-20 mA: KERN KFB-A05, € 100,-
- Signal lamp for visual support of weighing with tolerance range, only in combination with, KERN CFS-A03, € 280,-
- Y-cable for parallel connection of two terminal devices to the RS-232 interface on the scale, e.g. signal lamp and printer, KERN CFS-A04, € 35,-

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STANDARD			OPTION	FACTORY
CAL EXT	PCS SUM TOL MOVE 1	MULTI DMS 1 DAY 2 DAYS	ET DAkkS	BT 2.0 ANALOG ACCU 43 DAYS

Model	Weighing	Readability	Verification	Minimal load	Net weight	Weighing	Price	Option				
	capacity		value			plate	excl. of VAT	Verifica	tion	DAkkS Calibr. C	ertificate	
	[Max]	[d]	[e]	[Min]	approx.		ex works	MIII		DAkkS		
KERN	kg	g	g	g	kg		€	KERN	€	KERN	€	
IFB 3K-4	3	0,1	-	-	4,6	A	400,-	-	-	963-127	82,-	
IFB 6K-4S	6	0,2	-	-	4,6	A	390,-	-	-	963-128	99,-	
IFB 6K-4	6	0,2	-	-	5	В	400,-	-	-	963-128	99,-	
IFB 10K-4	15	0,5	-	-	5	В	360,-	-	-	963-128	99,-	
IFB 10K-4L	15	0,5	-	-	8	С	420,-	-	-	963-128	99,-	
IFB 30K-3	30	1	-	-	8	С	420,-	-	-	963-128	99,-	
IFB 60K-3	60	2	-	-	8	С	420,-	-	-	963-129	122,-	
IFB 60K-3L	60	2	-	-	11	D	560,-	-	-	963-129	122,-	
IFB 100K-3	150	5	-	-	11	D	560,-	-	-	963-129	122,-	
IFB 100K-3L	150	5	-	-	20	E	800,-	-	-	963-129	122,-	
IFB 300K-2	300	10	-	-	20	E	800,-	-	-	963-129	122,-	
IFB 600K-2	600	20	-	-	44	F	1000,-	-	-	963-130	173,-	
	Dual	-range balance	e switches aut	omatically to t	he next larges	t weighing ca	pacity [Max] a	nd readibility	/ [d]			
IFB 6K-3SM	3   6	1   2	1   2	20   40	4,6	A	400,-	965-228	70,-	963-128	99,-	
IFB 6K1DM	3   6	1   2	1   2	20   40	5	В	380,-	965-228	70,-	963-128	99,-	
IFB 15K2DM	6   15	2   5	2   5	40   100	5	В	380,-	965-228	70,-	963-128	99,-	
IFB 15K2DLM	6   15	2   5	2   5	40   100	8	C	480,-	965-228	70,-	963-128	99,-	
IFB 30K5DM	15   30	5   10	5   10	100   200	8	C	420,-	965-228	70,-	963-128	99,-	
IFB 60K10DM	30   60	10   20	10   20	200   400	8	C	440,-	965-229	93,-	963-129	122,-	
IFB 60K10DLM	30   60	10   20	10   20	200   400	11	D	570,-	965-229	93,-	963-129	122,-	
IFB 150K20DM	60   150	20   50	20   50	400   1000	11	D	560,-	965-229	93,-	963-129	122,-	
IFB 150K20DLM	60   150	20   50	20   50	400   1000	20	E	730,-	965-229	93,-	963-129	122,-	
IFB 300K50DM	150   300	50   100	50   100	1000   2000	20	E	740,-	965-229	93,-	963-129	122,-	
IFB 600K-1M	300   600	100   200	100   200	2000   4000	44	F	1060,-	965-230	132,-	963-130	173,-	
Note: F	or application		· ·	ease order ver		,			date is n	ot possible.		

Verification at the factory, we need to know the full address of the location of use.



## Precision industrial scale with laboratory accuracy

### Features

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- High-capacity precision balance, ideal for high volume or heavy samples to be weighed with a high degree of accuracy
- User guidance step by step on display by Yes/No dialogue
- Numerical subtraction of tare weight for known container weight. Useful for checking fill-levels
- Precise counting: The automatic reference weight optimisation of reference weight gradually improves the average piece weight value
- Freely programmable weighing unit, e.g. display direct in special units such as length of wire g/m, surface weight g/m<sup>2</sup>, or else
- Protective working cover included with delivery

### **Technical data**

- Large backlit LCD display, digit height 18 mm
  Weighing plate dimensions, stainless steel
- W×D×H
- A 228×228×95 mm
- 308×318×75 mm, see larger picture
- C 400×300×90 mm
- Dimensions of display device W×D×H 225×115×60 mm
- Cable length of display device approx.
  A, B 2 m, C 3 m
- Permissible ambient temperature 10 °C/40 °C

### Accessories

 Protective working cover over the display device, scope of delivery: 5 items, KERN DE-A12S05, € 40,-





- Image of the size in the size in
- Mount to fasten the display device to the platform, for models with weighing plate size ■, •, can be reordered, KERN DE-A11N, € 40,-
- Wall mount for display device, KERN DS-A02, € **30,-**
- Set for underfloor weighing, consists of platform, bow, hook, only for models with weighing plate II, KERN DS-A01, € 210,-
- Rechargeable battery pack external, operating time up to 30 h without backlight, charging time approx. 10 h, KERN KS-A01, € 160,-
- Internal rechargeable battery pack, operating time up to 30 h without backlight, charging time approx. 10 h, KERN KB-A01N, € 55,-
- Further details, plenty of further accessories and suitable printers see Accessories

Model	Weighing ca-	Readability	Smallest part	Net weight	Resolution	Weighing plate	Price	Option	
	pacity		weight				excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]	[Normal]	approx.			ex works	DAkkS	
KERN	kg	g	g/piece	kg	Points		€	KERN	€
DS 3K0.01S	3	0,01	0,1	4,2	300.000	A	660,-	963-127	82,-
DS 5K0.05S	5	0,05	0,5	4,2	100.000	А	580,-	963-127	82,-
DS 8K0.05	8	0,05	0,5	8	160.000	В	570,-	963-128	99,-
DS 10K0.1S	10	0,1	1	4,2	100.000	А	550,-	963-128	99,-
DS 16K0.1	16	0,1	1	9	160.000	В	570,-	963-128	99,-
DS 20K0.1	20	0,1	1	8	200.000	В	600,-	963-128	99,-
DS 30K0.1	30	0,1	1	8	300.000	В	630,-	963-128	99,-
DS 30K0.1L	30	0,1	1	18	300.000	С	840,-	963-128	99,-
DS 36K0.2	36	0,2	2	8	180.000	В	570,-	963-128	99,-
DS 36K0.2L	36	0,2	2	18	180.000	С	770,-	963-128	99,-
DS 60K0.2	60	0,2	2	18	300.000	С	840,-	963-129	122,-
DS 65K0.5	65	0,5	5	18	130.000	С	770,-	963-129	122,-
DS 100K0.5	100	0,5	5	18	200.000	C	820,-	963-129	122,-
DS 150K1	150	1	10	18	150.000	C	820,-	963-129	122,-







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Platform scale with stainless steel display device KERN SFE



## Platform scale with dust and spray protection IP65 and EC type approval [M]

### Features

- Platform scale protected to IP65 with stainless steel display device, for industrial applications, hygienic and easy to clean
- 11 Platform: weighing plate stainless steel, painted steel base, silicone-coated aluminium load cell, protection against dust and water splashes IP65
- Display device: Stainless steel, protection against dust and water splashes IP65, flexible positioning, e.g. free-standing or mounted to the wall, for details see KERN KFE-TM
- Weighing with tolerance range (checkweighing): a visual and audible signal helps with portioning, dispensing or grading
- · Hold function: When the weighing conditions are unstable, a stable weight is calculated determining an average value

PRE-TAR a known fill-levels, (

### **Technical data**

- Large backlit LCD display, digit height 22 mm
- Weighing plate dimensions, stainless steel W×D×H
- A 300×240×110 mm, see larger picture
- B 400×300×130 mm
- 500×400×140 mm
- D 650×500×140 mm
- Dimensions of display device W×D×H 195×120×70 mm
- · Cable length of display device approx. 3 m
- Internal rechargeable battery pack, operating time up to 35 h without backlight, charging time approx. 12 h
- Permissible ambient temperature -10 °C/40 °C

STANDARD	OPTION	FACIO								
CAL EXT	SUM	-√+ ⊙ 🤊 ୬ TOL	∧- <b></b> MOVE	<b>000</b> IP 65	ACCU		DMS	1 DAY	DAkkS +3 DAYS	+3 DA

E function for manual subtraction of	
container weight, useful for checking	
s. (only for non-verified models)	

### Accessories

- Stand to elevate display device, for models with weighing plate size A-D: Height of stand approx. 200 mm, Type ☑, KERN SFE-A01, € 65,-**B**-**D**: Height of stand approx. 400 mm,
- Type 2, KERN SFE-A02, € 65,-**I**-**I**: Height of stand approx. 600 mm, Type II, KERN SFE-A03, € 80,-
- Tare pan made from stainless steel. Ideal for weighing loose small parts as well as fruit, vegetables, etc., KERN RFS-A02, € 65,-

Model	Weighing	Readability	Verification	Minimal load	Net weight	Weighing	Price		(	Option	
	capacity		value			plate	excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	rtificate
	[Max]	[d]	[e]	[Min]	approx.		ex works	MIII		DAkkS	
KERN	kg	g	g	g	kg		€	KERN	€	KERN	€
SFE 6K-3NM	6	2	2	40	6	А	430,-	965-228	70,-	963-128	99,-
SFE 10K-3NM	15	5	5	100	6	A	420,-	965-228	70,-	963-128	99,-
SFE 10K-3LNM	15	5	5	100	8	В	490,-	965-228	70,-	963-128	99,-
SFE 30K-2NM	30	10	10	200	6	A	430,-	965-228	70,-	963-128	99,-
SFE 60K-2NM	60	20	20	400	8	В	480,-	965-229	93,-	963-129	122,-
SFE 60K-2LNM	60	20	20	400	12	С	570,-	965-229	93,-	963-129	122,-
SFE 100K-2NM	150	50	50	1000	8	В	490,-	965-229	93,-	963-129	122,-
SFE 100K-2LNM	150	50	50	1000	12	С	560,-	965-229	93,-	963-129	122,-
SFE 100K-2XLNM	150	50	50	1000	20	D	730,-	965-229	93,-	963-129	122,-
SFE 300K-1LNM	300	100	100	2000	20	D	710,-	965-229	93,-	963-129	122,-
Note: F	or application	s that require	verification, pl	ease order ver	ification at the	e same time, i	nitial verificat	on at a later	date is n	ot possible.	

Verification at the factory, we need to know the full address of the location of use.









### 10

Platform scale with stainless steel display device with IP68 rating, XL-display und EC type approval [M] – now also as high resolution version with high-resolution display



Piece-counting function



Durable stainless steel weighing plate



Stainless steel display device with IP68 protection, hygienic and easy to clean

### Platform scale with stainless steel display device KERN IXS



### Features

STANDARD

- Tough industry standard suitable for use in harsh industrial applications
- I Platform: weighing plate stainless steel, painted steel base, silicone-coated aluminium load cell, protection against dust and water splashes IP65, Substruction in wing design, extremely resistant to bending
- 2 Superior display size: digit height 55 mm, bright backlight for easy reading of weighing results, even in poor lighting conditions
- 2 Display device: Stainless steel, protection against dust and water splashes IP68, integrated power supply
- ESD drain to protect against electrostatic discharge e.g. for electrostatically-charged weighing objects or people who work with the scale
- Thanks to interfaces such as RS-232, RS-485 and Bluetooth (optional) the scale can easily be connected to existing networks and facilitates the data exchange between the scale and printer



### **Technical data**

- Large backlit LCD display, digit height 55 mm
- Weighing plate dimensions, stainless steel **W**×D×H
- A 300×240×86 mm
- 400×300×89 mm, see larger picture
- 500×400×123 mm 650×500×133,5 mm
- Dimensions of display device W×D×H 232×150×80 mm
- · Cable length of display device approx. 2,5 m
- Permissible ambient temperature -10 °C/40 °C

### Accessories

• 3 Stand to elevate display device A-D Height of stand approx. 50 mm, KERN IXS-A01, € 65,-A-D Height of stand approx. 200 mm, KERN IXS-A02, € 70,-B-D Height of stand approx. 400 mm, KERN IXS-A03, € 85,-**ID**-**D** Height of stand approx. 600 mm, KERN IXS-A04, € 105,-

OPTION

FACTORY



- · Internal rechargeable battery pack, operating time up to 80 h without backlight, charging time approx. 12 h, must be ordered at purchase, KERN GAB-A04, € 40,-
- Data interface RS-232, interface cable included, approx. 1,5 m, must be ordered at purchase, KERN KXS-A04, € 100,-
- · Data interface RS-485, must be ordered at purchase, KERN KXS-A01, € 145,-
- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, not in combination with verification, KERN KXS-A02, € 170,-
- · Foot switch, must be ordered at purchase, KERN KXS-A03, € 130,-
- Roller conveyor attachment, with smooth-running, hot-dip galvanised steel rollers with ball bearings, robust aluminium profile frame, for platform size ■ KERN YRO-01, € 660,-
- I KERN YRO-02, € 680,-■ KERN YRO-03, € 970,-
- · Further details, plenty of further accessories and suitable printers see Accessories

10

122,-

CAL EXT PCS SU		~	230 V DMS		ET +3 DAYS	• 6000 • RS 232	RS 485 BT	ACCU +3 DA			
		1 2		D		*	*				
Model	Weighing	Readability	Verification	Minimal load	Net weight	Weighing	Price		(	Option	
	range		value		_	plate	excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	ertificate
	[Max]	[d]	[e]	[Min]	approx.		ex works	MU		DAkkS	
KERN	kg	g	g	g	kg		€	KERN	€	KERN	€
IXS 6K-4	6	0,2	-	-	6	A	650,-	-	-	963-128	99,-
IXS 10K-4	15	0,5	-	-	6	A	610,-	-	-	963-128	99,-
IXS 10K-4L	15	0,5	-	-	11	В	720,-	-	-	963-128	99,-
IXS 30K-3	30	1	-	-	11	В	720,-	-	-	963-128	99,-
IXS 30K-3L	30	1	-	-	22	С	850,-	-	-	963-128	99,-
IXS 60K-3	60	2	-	-	11	В	640,-	-	-	963-129	122,-
IXS 60K-3L	60	2	-	-	22	С	850,-	-	-	963-129	122,-
IXS 100K-3	150	5	-	-	22	С	850,-	-	-	963-129	122,-
IXS 100K-3L	150	5	-	-	36	D	960,-	-	-	963-129	122,-
IXS 300K-2	300	10	-	-	36	D	980,-	-	-	963-129	122,-
	D	ual-range baland	ce switches auto	matically to the	next largest we	eighing ca	pacity [Max] a	nd readibility	y [d]		
IXS 6K-3M	3   6	1   2	1   2	20   40	6	A	610,-	965-228	70,-	963-128	99,-
IXS 10K-3M	6   15	2   5	2   5	40   100	6	A	650,-	965-228	70,-	963-128	99,-
IXS 10K-3LM	6   15	2   5	2   5	40   100	11	В	720,-	965-228	70,-	963-128	99,-
IXS 30K-2M	15   30	5   10	5   10	100   200	11	В	720,-	965-228	70,-	963-128	99,-
IXS 30K-2LM	15   30	5   10	5   10	100   200	22	C	850,-	965-228	70,-	963-128	99,-
IXS 60K-2M	30   60	10   20	10   20	200   400	11	В	720,-	965-229	93,-	963-129	122,-
IXS 60K-2LM	30   60	10   20	10   20	200   400	22	C	850,-	965-229	93,-	963-129	122,-
IXS 100K-2M	60   150	20   50	20   50	400   1000	22	С	850,-	965-229	93,-	963-129	122,-
IXS 100K-2LM	60   150	20   50	20   50	400   1000	36	D	990,-	965-229	93,-	963-129	122,-

50 | 100 50 | 100 1000 | 2000 36 965-229 Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible. Verification at the factory, we need to know the full address of the location of use.

D

990.-

\* Either RS-232 or RS-485 can be installed and used

150 | 300

IXS 300K-2M

963-129

93.-

## Floor scales/Pallet scales/Drive-through scales

From Goods input through to production and on to dispatch – our modern, powerful floor scales can be used everywhere and intuitively. Many clever functions will help you to carry out processes effectively and economically. While meeting high requirements it will save ressources.

In our floor scales product category, we offer our customers a carefully coordinated product range in the weighing range from 300 to 6,000 kg. Choose between affordable entry level models, practical built-in solutions or Premium products made from stainless steel and verified. All floor scales really stand out because of their durable industrial quality as well as reliable protection against dust and water splashes.

### Industrial scales for heavy loads

When weighing large containers and heavy goods, scales must overcome different challenges. As well as correspondingly large weighing ranges, a high level of stability and sturdiness is necessary, in order to withstand the maximum loads acting on the weighing plate. Our floor scales are perfectly suited for this task, for example through generously sized struts and material thicknesses, mobile stored adjustable feet for the protection of the load cells, IP67 protection against dust and water splashes or a convenient disconnect device bet ween the display device and platform. The latter means that you can install a verified scale in a packing and dispatch bench or a pit frame for barrier-free access at a later date. Large LCD displays make it easier to read the display even if the angle of view is not ideal. We also have pallet scales, weighing beams and drive-through scales available for versatile use.

Our recommendation: High-resolution KERN BIC floor scale with 2 x 3,000 [d] at the best price-to-performance ratio.

### Easy integration through digital interfaces

Thanks to interfaces such as RS-232, USB, Bluetooth, WLAN, Ethernet the scale can easily be connected to existing networks. Data exchange between scale and PC or printer is easy and reliable. The standardised KCP interface (Kern Communication Protocol) takes over the searching und remote control of the scale using external control devices or computers. KCP enables you to recall and control the relevant parameters and device functions and is also compatible with the MT-SICS protocol in most cases. UID pallet scale with EC type approval [M] and various data interfaces

### The KERN calibration and verification service

In order to fulfil quality requirements in accordance with DIN EN ISO 9000ff and other standards, we can offer our customers DAkkS calibration. Calibration ensures correct, usable weighing results and makes the floor scale into a reliable measuring and testing instrument. When calibrating, deviations in the display will be identified and documented. The main points to remember are: DAkkS calibration is always sensible, when checking equipment is to be used in a QM process. While calibration is not legally regulated, verification is mandatory in different applications for example:

- In commercial trade, if the price of goods are determined by weighing results.
- In the production of pre-packaged goods
- In the pharmaceutical industry
- For official purposes.

Our recommendation: BID floor scale with EC type approval [M] and the best price-to-performance ratio – now also as a high-resolution dual-range balance

### Individual solutions for maximum efficiency

The weighing ranges of bench counting scales are often not sufficient to count large quantities, units or items on pallets. This is where high-performance counting systems come into their own, as these combine a high-precision reference scale with a high-capacity bulk scale, such as for example a floor scale, pallet scale or drive-through scale.

If you have special requirements, you can also configure your ideal scale easily and quickly so that it meets your needs. We will put your weighing combination together for you, using the components you have selected and including verification. Please contact your personal customer advisor for further information!

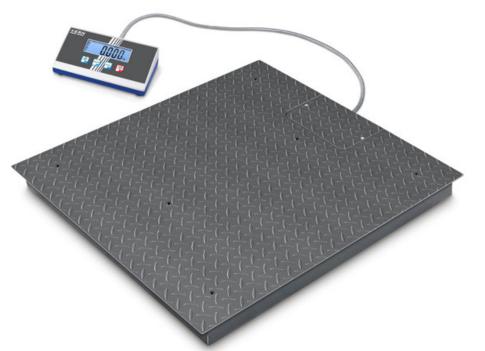
Proof of compatibility
Conformity evaluation
Conformity declaration

Our recommendation: High-resolution dual-range KERN

## Quick-Finder Floor scales/Pallet scales/Drive-through scales

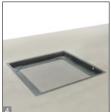
Readability	Weighing capacity	Weighing plate W×D×H	Model	Price excl. of VAT	Page		м		•	8	((1-		КСР		-√+ ⊙ 🤊 ୬	
[d]	[Max]			ex works		DAYS		RS 232	USB	BT	WLAN	LAN	PROTOCOL	PCS	TOL	ACCU
g 50   100	kg 300   600	mm 1000×1000×108	KERN BID 600K-1DS	€ 1230,-	106	2		For an	explan	ation c	on the p	oictos,	see fro	nt flap	)	
50   100	300   600	1200×1500×108	BID 600K-1DS	1230,-	106	2			0	0	0	0				
100	300	1000×1000×80	NIB 300K-1	760,-	115	2			_	-	_					
100   200	300   600	1000×1000×108	BIC 600K-1S	850,-	104	2										
100   200	300   600	1200×1500×108	BIC 600K-1	1170,-	104	2										
100   200	300   600	1000×1000×108 1200×1500×108	BID 600K-1DSM BID 600K-1DM	<u>    1080,-                                   </u>	105 105	2	0 0	•	0 0	0	0	0	•	•	•	0
100   200	300   600	1195×840×110	UID 600K-1DM	1110,-	112	2	0	•	0	0	0	0	•	•	•	0
100   200	600   1500	1000×1000×108	BID 1T-4DS	1260,-	106	2			0	0	0	0				
100   200	600   1500	1200×1500×108	BID 1T-4D	1570,-	106	2			0	0	0	0				
200	600 600	1000×1000×108 1200×1500×108	BID 600K-1SM BID 600K-1M	<u>    1070,-</u> 1400,-	105 105	2	0 0	•	0	0	0	0	•	•	•	<u> </u>
200	600	1200×1500×108	BFN 600K-1SM	2770,-	105	2	0	0		<u> </u>			•	•		<u> </u>
200	600	800×120×100	UFA 600K-1S	1040,-	110	2		٠		0			•	•	٠	0
200	600	1000×1000×85	BFB 600K-1SNM	1310,-	107	2	0	•		0			•	٠	•	0
200	600	1500×1250×85	BFB 600K-1NM	1850,-	107	2	0	•		0			•	•	•	0
200	600 600	1195×840×110 1195×840×110	UIB 600K-1 UID 600K-1M	<u>910,-</u> 1050,-	111 112	2	0	•	0	0	0	0	•	•	•	0
200	600	1190×840×90	UFB 600K200M	1220,-	113	2	0	•		0			•	•	•	0
200	600	1600×1200×80	NFB 600K200M	1790,-	116	2	0	٠		0			٠	٠	٠	0
200	600	1800×1400×80	NFB 600K200LM	2090,-	116	2	0	•		0			•	•	•	0
200	600 600	1600×1200×80 1360×840×90	NFN 600K-1M UFN 600K200IPM	<u> </u>	117 114	2	0 0	0					•	•	•	<u> </u>
200	600	1000×1000×80	NIB 600K-2	760,-	115	2										
200   500	600   1500	1000×1000×108	BIC 1T-4S	830,-	104	2										
200   500	600   1500	1200×1500×108	BIC 1T-4	1130,-	104	2										
200   500	600   1500 600   1500	1000×1000×108 1200×1500×108	BID 1T-4DSM BID 1T-4DM	1120,-	105 105	2	0 0	•	0 0	0	0	0	•	•		0
200   500	600   1500	1200×1500×108	UID 1500K-1DM	<u>    1440,-</u> 1080,-	112	2	0		0	0	0	0		•		0
200   500	1500   3000	1500×1500×108	BID 3T-3DL	1820,-	106	2			0	0	0	0				
200   500	1500   3000	1200×1500×108	BID 3T-3D	1570,-	106	2			0	0	0	0				
500	1500	1000×1000×108	BID 1T-4SM	1090,-	105	2	0	•	0	0	0	0	•	•	•	0
500 500	1500 1500	1200×1000×108 1200×1500×108	BID 1T-4EM BID 1T-4M	<u> </u>	105 105	2	0 0	•	0	0	0	0	•	•		<u> </u>
500	1500	1500×1500×108	BID 1T-4LM	1640,-	105	2	0	•	0	0	0	0	•	•	•	0
500	1500	1495×1245×95	BFN 1.5T0.5M	3550,-	109	2	0	0					•	•	•	•
500	1500	1000×1000×90	BFN 1T-4SM	2790,-	109	2	0	0					•	٠	•	•
500 500	1500 1500	1200×120×100 1000×1000×100	UFA 1.5T0.5 BFB 1T-4SNM	<u>    1060,-</u> 1350,-	110 107	2	0	•		0			•	•	•	<u> </u>
500	1500	1500×1250×90	BFB 1T-4NM	1820,-	107	2	-0			0				•		
500	1500	1195×840×110	UIB 1.5T-4	910,-	111	2										
500	1500	1190×840×110	UID 1500K-1M	1050,-	112	2	0	٠	0	0	0	0	•	٠	•	0
500	1500	1190×840×90	UFB 1.5T0.5M	1220,-	113	2	0	•		0			•	•	•	<u> </u>
500 500	1500 1500	1600×1200×80 1800×1400×80	NFB 1.5T0.5M NFB 1.5T0.5LM	<u> </u>	116 116	2	0 0	•		0				•		<u> </u>
500	1500	1600×1200×80	NFN 1.5T-4M	3390,-	117	2	0	0		-			•	•	•	•
500	1500	1360×840×90	UFN 1.5T0.5IPM	1690,-	114	2	0	0							٠	•
500   1000	1500   3000	1200×1500×108	BIC 3T-3	1130,-	104	2										
500   1000 500   1000	1500   3000 1500   3000	1500×1500×108 1200×1500×108	BIC 3T-3L BID 3T-3DM	<u>1380,-</u> 1440,-	104 105	2	0	•	0	0	0	0	•	•	•	0
500   1000	1500   3000	1500×1500×108	BID 3T-3DLM	1680,-	105	2	0	•	0	0	0	0	•	•		0
500   1000	1500   3000	1190×840×110	UID 3000K-0DM	1080,-	112	2	0	•	0	0	0	0	•	•		0
1000	3000	1200×1500×108	BID 3T-3M	1400,-	105	2	0	٠	0	0	0	0	•	٠	•	0
1000	3000	1500×1500×108	BID 3T-3LM	1650,-	105	2	0	•	0	0	0	0	•	•	•	<u> </u>
1000	3000 3000	1495×1245×95 1200×120×100	BFN 3T-3M UFA 3T1	<u> </u>	109 110	2	0	•		0			•	•	•	•
1000	3000	2000×160×100	UFA 3T-3L	1290,-	110	2		•		0			•	•	•	0
1000	3000	1500×1250×85	BFB 3T-3NM	1850,-	107	2	0	٠		0			•	•	٠	0
1000	3000	1500×1500×80	BFB 3T1LM	2050,-	107	2	0	٠		0			٠	٠	•	0
1000	3000 3000	1195×840×110 1195×840×110	UIB 3T-3 UID 3000K-0M	<u>910,-</u> 1050,-	111 112	2	0	•	0	0	0	0	•	•	•	0
2000	6000	1200×160×100	UFA 6T-3	1050,-	112	2	0		0	0	0	0	•	•		0
2000	6000	2000×160×100	UFA 6T-3L	1780,-	110	2		•		0			•	•	•	0
2000	6000	1500×1500×130	BFB 6T-3M	2410,-	107	2	0	۲		0			٠	•	٠	0
News 2022	2												• = st	tandar	d <b>o</b> =	option

• = standard • = option









# High-resolution floor scale with 2×3000 [d] and the best price-to performance ratio

### Features

- Weighing bridge: out of anti-slip corrugated steel, 4 load cells, alloy steel, silicone-coated, IP67
- Welded platform with screw holes to lift the scale for easy cleaning
- Easy levelling of the weighing bridge as well as access to the junction box from above
- Simple and convenient 4-key operation
- 11 Wall mount for display device, standard
  - A clever plug-in connector means that you can easily separate the display device and the platform, e.g. for installing the balance in a packing and dispatch bench, pit frame etc. at a later date
  - Did you know? Our floor scales are delivered in a robust wooden box. This protects the high-quality weighing technology from environmental influences and stresses during transportation. KERN – always one step ahead

### **Technical data**

- Large LCD display, digit height 25 mm
- Weighing plate dimensions W×D×H
  - A 1000×1000×108 mm
  - 1200×1500×108 mm
  - C 1500×1500×108 mm
- Dimensions of display device W×D×H 235×114×51 mm
- Optional battery operation, 4×1.5 V AA not included in scope of delivery, operating time up to 60 h
- Cable length of display device approx. 5 m
- Permissible ambient temperature -10 °C/40 °C

### Accessories

- Protective working cover, scope of delivery: 5 items, KERN EOB-A04BS05, € 40,-
- Pair of base plates to fix the weighing bridge to the floor, KERN BIC-A07, € 40,-
- Is Ascending ramp, steel, powder coated, for models with weighing plate size
   1000×1000×108 mm,

KERN BIC-A01, € 385,-

- I200×1000×108 mm,
- KERN BIC-A02, **€ 480,-**
- 1500×1000×108 mm,
- KERN BIC-A03, **€ 550,-**
- I Stable pit frame, steel, for models with weighing plate size
  1088×1088×110 mm, KERN BIC-A04, € 370,1288×1588×110 mm, KERN BIC-A05, € 400,1588×1588×110 mm, KERN BIC-A06, € 420,-

Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping costs

STANDARD								OPTION
	C	^-,	666		<u>с н</u>		<b></b>	DAkkS
CAL EXT	UNIT	MOVE	IP 67	BATT	MULTI	DMS	2 DAYS	+3 DAYS
			1					

Model	Weighing capacity	Readability	Net weight	Weighing plate	Price	Option	
					excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]	approx.		ex works	DAkkS	
KERN	kg	kg	kg		€	KERN	€
	Dual-range balan	ce switches automatically	to the next largest weighin	g capacity [Max] and read	ibility [d]		
BIC 600K-1S	300   600	0,1   0,2	70	A	850,-	963-130	173,-
BIC 600K-1	300   600	0,1   0,2	150	В	1170,-	963-130	173,-
BIC 1T-4S	600   1500	0,2   0,5	150	A	830,-	963-130	173,-
BIC 1T-4	600   1500	0,2   0,5	70	В	1130,-	963-130	173,-
BIC 3T-3	1500   3000	0,5   1	150	В	1130,-	963-132	460,-
BIC 3T-3L	1500   3000	0,5   1	150	С	1380,-	963-132	460,-



Floor scale with EC type approval [M] and the best price-to-performance ratio – now also as high-resolution dual-range balance



Did you know? Our floor scales are delivered in a robust wooden box. This protects the high-quality weighing technology from environmental influences and stresses during transportation. KERN – always one step ahead



Access ramp incl. pair of base plates to facilitate access of e.g. wire cage trolleys, shelf trolleys, container trolleys, storage trolleys, sack trucks, transpallets, mobile containers, containers refuse etc.



Verification plug, for verified balances this enables you to separate the display device and platform without affecting the verification, e.g. for installing the scale in a packing and dispatch table, pit frame etc. at a later date.

### Floor scales KERN BID/BID-D

### Features

- Dual-range floor scales, ideal, high maximum loads need to be weighed, but in the lower load range you still need high resolution. This means that two scales can be replaced with one – which saves space and money!
- BID 1T-4EM: Compact special size, especially for weighing europallets
- Weighing bridge: out of anti-slip corrugated steel, 4 load cells, alloy steel, silicone-coated, IP67
- Easy levelling of the weighing bridge as well as access to the junction box from above
- Display device: for details see KERN KIB-TM
- Totalising of weights and piece counts
- Thanks to interfaces such as RS-232 or USB, WiFi, Bluetooth, Ethernet (optional), the scale can easily be connected to existing networks. Data exchange between the scale, PC or printer
- Searching and remote control of the balance using external control devices or computers with the KERN Communication Protocol (KCP). KCP is a standardised interface command structure for KERN balances and other instruments which allows you to recall and manage all relevant parameters and device functions. You can therefore simply connect KERN devices with KCP to computers, industrial control systems and other digital systems. In a large number of cases the KCP is compatible with the MT-SICS protocol.

### **Technical data**

11

- Large LCD display, digit height 25 mm
- Weighing plate dimensions W×D×H
   1000×1000×108 mm, 1200×1000×108 mm
   1200×1500×108 mm, 1500×1500×108 mm

- Dimensions of display device W×D×H 268×115×80 mm
- Cable length of display device approx. 5 m
- Permissible ambient temperature -10 °C/40 °C

### Accessories

- Protective working cover, scope of delivery: 5 items, KERN EOC-A01S05, € 40,-
- Pair of base plates to fix the weighing bridge to the floor, KERN BIC-A07, € 40,-
- Ascending ramp, steel, powder coated, for models with weighing plate size

  I KERN BIC-A01, € 385,

  KERN BIC-A02, € 480,-
- KERN BIC-A03, € 550,-
- Stable pit frame, Steel, powder-coated, to install the weighing bridge so you can drive straight on, for models with weighing plate size
  KERN BIC-A04, € 370,KERN BIC-A08, € 360,KERN BIC-A05, € 400,-
- KERN BIC-A06, € 420,-
- Benchtop stand incl. wall mount for display device, KERN EOC-A04, € 30,-
- Internal rechargeable battery pack, operating time up to 43 h without backlight, charging time approx. 3 h, KERN KFB-A01, € 35,-
- USB data interface, for transferring weighing to the PC, printer etc., KERN KIB-A03, € 120,-
- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, not possible in combination with verification, KERN KIB-A04, € 110,-

- WiFi interface for wireless connection of the balance to networks and WiFi capable devices, such as tablets or laptops, continuous data transfer, must be ordered at purchase, KERN KIB-A10, € 120,-
- Ethernet data interface, to connect an IP-based Ethernet network, continuous data transfer, must be ordered at purchase, KERN KIB-A02, € 150,-
- Signal lamp, including interface, for visual support of weighing with tolerance range, must be ordered at purchase, KERN KIB-A06, € 390,-
- Alibi memory, including USB interface for exporting weighing results to external data storage media, such as, for example, USB
- sticks, hard drives, etc., KERN KIB-A01, € 150,Verification plug, for verified balances this enables you to separate the display device and platform without affecting the verification, e.g. for installing the scale in a packing and dispatch table, pit frame etc. at a later date. Please order this at the same time as you purchase your scale, KERN KIB-A12, € 150,-

### Note:

For verified scales the weighing bridge must be fixed to the floor. Optionally, with an access ramp, a footplate pair or a pit frame

In addition to the RS-232 data interface, which is integrated as standard, only one other data interface can be installed and operated

Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping costs

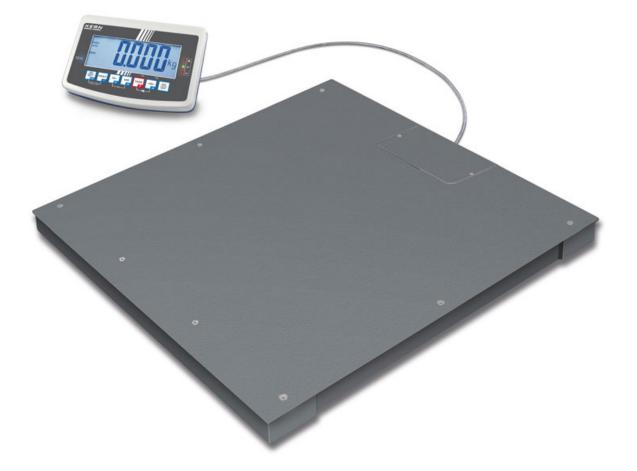
	STANDARD	)											OPTION			FACTORY					
1	CAL EXT	• #### RS 232	KCP PROTOCOL	GLP PRINTER	PCS	SUM	% Percent	-√+ ⊙ ৢৢৢ TOL	<b>66</b> 5	<b>66</b> 7	DMS	2 DAYS	ET	ACCU	DAkks +3 days	ALIBI	USB	BT 4.0	((• WIFI	LAN	M +3 DAYS
									2	4											

							· · · · · · · · · · · · · · · · · · ·				
Model	Weighing	Readability	Verification	Minimal load	Net weight	Weighing	Price		(	Option	
	capacity		value			plate	excl. of VAT	Verifica	tion	DAkkS Calibr. C	ertificate
	[Max]	[d]	[e]	[Min]	approx.		ex works	MU		DAkkS	
KERN	kg	kg	kg	kg	kg		€	KERN	€	KERN	€
			Dual-	range balance	with high reso	lution readab	ility				
BID 600K-1DS	300   600	0,05   0,1	-	-	70	A	1230,-	-	-	963-130	173,-
BID 600K-1D	300   600	0,05   0,1	-	-	150	С	1570,-	-	-	963-130	173,-
BID 1T-4DS	600   1500	0,1   0,2	-	-	70	А	1260,-	-	-	963-130	173,-
BID 1T-4D 🔤	600   1500	0,1   0,2	-	-	150	С	1570,-	-	-	963-130	173,-
BID 3T-3D 🔤	1500   3000	0,2   0,5	-	-	150	С	1570,-	-	-	963-132	460,-
BID 3T-3DL	1500   3000	0,2   0,5	-	-	155	D	1820,-	-	-	963-132	460,-
										•	
BID 600K-1SM	600	0,2	0,2	4	70	A	1070,-	965-230	132,-	963-130	173,-
BID 600K-1M	600	0,2	0,2	4	150	С	1400,-	965-230	132,-	963-130	173,-
BID 1T-4SM	1500	0,5	0,5	10	70	A	1090,-	965-230	132,-	963-130	173,-
BID 1T-4M	1500	0,5	0,5	10	150	С	1400,-	965-230	132,-	963-130	173,-
BID 1T-4EM	1500	0,5	0,5	10	85	В	1160,-	965-230	132,-	963-130	173,-
BID 1T-4LM	1500	0,5	0,5	10	160	D	1640,-	965-230	132,-	963-130	173,-
BID 3T-3M	3000	1	1	20	150	С	1400,-	965-232	200,-	963-132	460,-
BID 3T-3LM	3000	1	1	20	160	D	1650,-	965-232	200,-	963-132	460,-
	Dual	-range balance	e switches aut	omatically to t	he next larges	t weighing ca	pacity [Max] a	nd readibility	y [d]		
BID 600K-1DSM	300   600	0,1   0,2	0,1   0,2	2	70	A	1080,- 🔮	965-230	132,-	963-130	173,-
BID 600K-1DM	300   600	0,1   0,2	0,1   0,2	2	150	С	1440,-	965-230	132,-	963-130	173,-
BID 1T-4DSM	600   1500	0,2   0,5	0,2   0,5	5	70	A	1120,-	965-230	132,-	963-130	173,-
BID 1T-4DM	600   1500	0,2   0,5	0,2   0,5	5	150	С	1440,-	965-230	132,-	963-130	173,-
BID 3T-3DM	1500   3000	0,5   1	0,5   1	10	150	С	1440,-	965-232	200,-	963-132	460,-
BID 3T-3DLM	1500   3000	0,5   1	0,5   1	10	160	D	1680,-	965-232	200,-	963-132	460,-
Note: F	or application	s that require	verification pl	ease order ver	ification at the	e same time, i	nitial verificat	ion at a later	date is n	ot possible.	

ons that require verification, please order verification at the same time, initial verification at a lat Verification at the factory, we need to know the full address of the location of use.

Price reduction





Weighing bridge with screwed-on weighing plate (IP67) and XXL display device, with EC type approval [M]



Weighing plate can be unscrewed The weighing plate can be conveniently unscrewed for maintenance or cleaning purposes (weighing plate size [], [])



Easy levelling of the weighing bridge as well as access to the junction box from above



**Did you know?** Our floor scales are delivered in a robust wooden box. This protects the high-quality weighing technology from environmental influences and stresses during transportation. KERN – always one step ahead

### Floor scale KERN BFB

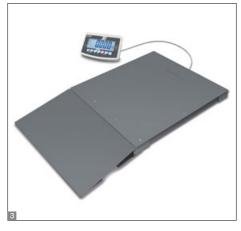


### Features

- Weighing plate III, III screwed on from the top, so it easy to remove, hygienic and easy to clean
- Weighing bridge: steel, powder coated, weighing plate size **I**, **D** corrugated steel plate, welded, 4 silicone-coated steel load cells, dust and spray protection IP67
- Display device: for details see KERN KFB-TM
- Benchtop stand incl. wall mount for display device as standard
- Totalising of weights and piece counts
- · Protective working cover included with delivery

### **Technical data**

- Large backlit LCD display, digit height 52 mm
- Weighing plate dimensions W×D×H
- A 1000×1000×85 mm
- I500×1250×85 mm
- 1500×1500×80 mm
- 1500×1500×130 mm
- Dimensions of display device W×D×H 250×160×58 mm
- Cable length of display device approx. 5 m
- Permissible ambient temperature -10 °C/40 °C



### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN KFB-A02S05, € 40,-
- I Stand to elevate display device Column height approx. 800 mm,
   KERN BFS-A07, € 140,-
- Pair of base plates to fix the weighing bridge to the floor, for models with weighing plate size
  A, O, KERN BFS-A06N, € 70,KERN BFS-A10, € 60,-
- Is Ascending ramp, Steel, lacquered, not included, for models with weighing plate size
   Is KERN BFS-A01N, € 350,-
- KERN BFS-A02N, € 410, KERN BFS-A09N, € 550,-
- KERN BFS-A11, € 540,-
- I Stable pit frame, steel, for models with weighing plate size
  I KERN BFS-A03N, € 350,-
- KERN BFS-A04N, € 710,-
- ☑ KERN BFS-A08, € 440,-
- Internal rechargeable battery pack, operating time up to 35 h without backlight, charging time approx. 10 h, must be ordered at purchase, KERN KFB-A01, € 35,-
- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, not in combination with verification.
   When installing the Bluetooth data interface, the RS-232 data interface can no longer be used, not possible in combination with RS 232 data interface, KERN KFB-A03, € 135,-



- Analogue module, must be ordered at purchase, not possible in combination with signal lamp
  - 0-10 V: KERN KFB-A04, € 100,-
- 4-20 mA: KERN KFB-A05, € 100,Signal lamp for visual support of weighing with tolerance range, not possible in combination with analogue module, KERN CFS-A03, € 280,-
- Large display with superior display size, KERN YKD-A02, € 260,-
- Cable with special length 15 m, between display device and platform, for verified models which must be ordered at the time of purchase, KERN BFB-A03, € 170,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

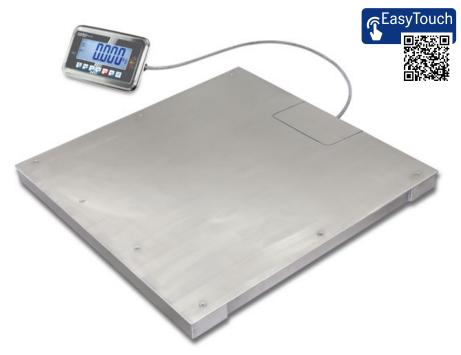
**Note:** For verified scales the weighing bridge must be fixed to the floor. Optionally, with an access ramp, a footplate pair or a pit frame

Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping costs



	965-230 13	DAkkS Calibr. Cer           DAkkS           KERN           2,-	r <b>tificate</b> € 173,-
€ A 1310,- 9	KERN € 965-230 13	€ KERN	-
	965-230 13	KENN	-
		2,- 963-130	173
			- /
B 1850,- 9	965-230 13	2,- 963-130	173,-
A 1350,- 9	965-230 13	2,- 963-130	173,-
B 1820,- 9	965-230 13	2,- 963-130	173,-
B 1850,- 9	965-232 20	0,- 963-132	460,-
C 2050,- 9	965-232 20	0,- 963-132	460,-
	965-232 20	0,- 963-132	460,-
	B         1850,-           C         2050,-	Image: 1850,-         965-232         20           Image: 1850,-         965-232         20           Image: 1850,-         965-232         20	Image: 1850,-         965-232         200,-         963-132           Image: 2050,-         965-232         200,-         963-132

Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible. Verification at the factory, we need to know the full address of the location of use.



Stainless steel weighing bridge with screwed-on weighing plate (IP68) and stainless steel display device (IP65), with EC type approval [M]

### Features

- Tough industry standard suitable for use in harsh industrial applications
- Weighing plate screwed on from the top with stainless steel screws, so it's easy to remove, hygienic and easy to clean
- Weighing bridge: stainless steel, extremely resistant to bending due to material thickness, 4 welded stainless steel load cells, dust and spray protection IP68. Weighing bridge can also be delivered as component without the display device, for details see KERN KFD-V40.
- Your support in a HACCP-compliant quality system
- Easy levelling of the weighing bridge as well as access to the junction box from above
- Display device: Stainless steel, protection against dust and water splashes IP65, for industrial applications, hygienic and easy to clean, integrated power supply. The display device can also be delivered as a component without the weighing bridge, for details see KERN KFN-TM
- Benchtop stand incl. wall mount for display device as standard

- Totalising of weights and piece counts
- Internal rechargeable battery pack included with delivery
- Did you know? Our floor scales are delivered in a robust wooden box. This protects the high-quality weighing technology from environmental influences and stresses during transportation. KERN – always one step ahead

### **Technical data**

- Large backlit LCD display, digit height 52 mm
- Dimensions of display device W×D×H
  266×165×96 mm
- Cable length of display device approx. 5 m
- Weighing plate dimensions W×D×H
  1000×1000×90 mm, 1500×1250×95 mm
- Permissible ambient temperature -10 °C/40 °C

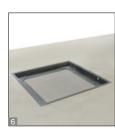
# Accessories

- Is Stand to elevate display device, height of stand approx. 800 mm, KERN YKP-02, € 190,-
- Pair of base plates to fix the weighing bridge to the floor, KERN BFN-A03, € 85,-









- I Ascending ramp, stainless steel, not included, for models with weighing plate size
   I KERN BFN-A05, € 1110,-
- KERN BFN-A01, € **1290,-**
- Stable pit frame, Stainless Steel, for models with weighing plate size
- ▲ KERN BFN-A06, € 800, B KERN BFN-A02, € 1000,-
- Bluetooth data interface, must be ordered at
- purchase, KERN KFB-A03, € **135,-**• Analogue module,
- 0–10 V: KERN KFB-A04, € 100,-4–20 mA: KERN KFB-A05, € 100,-
- Internal rechargeable battery pack, operating time up to 35 h without backlight, charging time approx. 12 h, KERN GAB-A04, € 40,-
- RS 232 data interface including interface cable
   1,5 m, must be ordered at purchase,
   KERN KFN-A01, € 95,-
- Cable with special length 15 m, between display device and platform, for verified models which must be ordered at the time of purchase, KERN BFB-A03, € 170,-
- Further details, plenty of further accessories and suitable printers see Accessories

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**Note:** For verified scales the weighing bridge must be fixed to the floor. Optionally, with an access ramp, a footplate pair or a pit frame

Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping costs

Optionally configurable with IP68 display device on request, details see chapter 13

STANDARD		OPTION	FACTORY		
CAL EXT PROTOCOL PCS		E IP 65 IP 68		ET +3 DAKKS	RS 232 BT 2.0 ANALOG +3 DAYS
		2 1			* *

Model	Weighing	Readability	Minimal load	Net weight	Weighing plate	Price	Option				
	capacity	= Verification value				excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	rtificate	
	[Max]	[d] = [e]	[Min]	approx.		ex works	MIII		DAkkS		
KERN	kg	kg	kg	kg		€	KERN	€	KERN	€	
BFN 600K-1SM	600	0,2	4	100	A	2770,-	965-230	132,-	963-130	173,-	
BFN 1T-4SM	1500	0,5	10	100	A	2790,-	965-230	132,-	963-130	173,-	
BFN 1.5T0.5M	1500	0,5	10	145	В	3550,-	965-230	132,-	963-130	173,-	
BFN 3T-3M	3000	1	20	150	В	3900,-	265-232	200,-	963-132	460,-	
Note: F	Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible.										

Verification at the factory, we need to know the full address of the location of use.

\* Not possible in combination with RS 232 data interface



# Highly versatile weighing beams (IP67) for large loads to 6 t

# Features

- Flexible solution for weighing large, bulky or long items thanks to freely positionable weighing beams and a 5 m (!) long connecting cable between the beams
- High mobility: thanks to rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations
- I Weighing beams: steel, painted, 4 silicone-coated aluminium load cells, protection against dust and water splashes IP67, weighing beams can also be delivered as components without the display device, for details see KERN KFA-V20
  - Issued to the second sec
  - 🛛 KERN UFA-L: Each weighing beam has a roller and handle for easy transport of the scale
  - Display device: for details see KERN KFB-TM
  - Benchtop stand incl. wall mount for display device as standard

- Totalising of weights and piece counts
- Protective working cover included with delivery
- KERN UFA-S, new model with short weighing beams, ideal for weighing compact items or animals in transport boxes
- Did you know? Our floor scales are delivered in a robust wooden box. This protects the high-quality weighing technology from environmental influences and stresses during transportation. KERN – always one step ahead

# **Technical data**

- Large backlit LCD display, digit height 52 mm
- Dimensions of display device W×D×H
  250×160×65 mm
- Cable length of display device approx. 5 m
- Cable length weighing beams approx. 5 m
- Permissible ambient temperature -10 °C/40 °C









# Accessories

- Protective working cover, scope of delivery:
   5 items, KERN KFB-A02S05, € 40,-
- Stand to elevate display device Column height approx. 800 mm, KERN BFS-A07, € 140,-
- Internal rechargeable battery pack, operating time up to 35 h without backlight, charging time approx. 10 h, KERN KFB-A01, € 35,-
- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, not in combination with verification.
  When installing the Bluetooth data interface, the RS-232 data interface can no longer be used, not possible in combination with RS 232 data interface,
- KERN KFB-A03, € 135,-
- Analogue module, must be ordered at purchase, not possible in combination with signal lamp
- 0-10 V: KERN KFB-A04, € 100,-4-20 mA: KERN KFB-A05, € 100,-
- If Signal lamp for visual support of weighing with tolerance range, not possible in combination with analogue module, KERN CFS-A03, € 280,-
- **I** Large display with superior display size, KERN YKD-A02, **€ 260,**-
- Y-cable for parallel connection of two terminal devices to the RS-232 interface on the scale, e.g. signal lamp and printer, KERN CFS-A04, € 35,-
- Cable with special length 15 m, between display device and platform, for verified models which must be ordered at the time of purchase, KERN BFB-A03, € 170,-
- Further details, plenty of further accessories and suitable printers see Accessories

STANDARD	OPTION	FACTORY
CAL EXT RS 232 PROTOCOL PCS SUM UNIT TO MOVE IP 67 MULTI DMS 2 DAYS	ET +3 DAKKS	BT 2.0 ANALOG ACCU

Model	Weighing capacity	Readability	Net weight	Dimensions	Price	Option	
				Weighing beam	excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]	approx.	W×D×H	ex works	DAkkS	
KERN	kg	kg	kg	mm	€	KERN	€
UFA 600K-1S	600	0,2	36	800×120×100	1040,-	963-130	173,-
UFA 1.5T0.5	1500	0,5	38	1200×120×100	1060,-	963-130	173,-
UFA 3T1	3000	1	38	1200×120×100	1050,-	963-132	460,-
UFA 3T-3L	3000	1	60	2000×160×100	1290,-	963-132	460,-
UFA 6T-3	6000	2	85	1200×160×100	1380,-	963-132	460,-
UFA 6T-3L	6000	2	135	2000×160×100	1780,-	963-132	460,-









Pallet scale with steel load support (IP67) and the best price-to-performance ratio

# Features

- High mobility: thanks to battery operation, compact, lightweight construction, it is suitable for the use in several locations
- Load support: steel, powder coated, 4 silicone-coated aluminium load cells, protection against dust and water splashes IP67
- I The scale can be easily transported using rollers and a handle and does not require much storage space
- Totalising of weights and piece counts
- Protective working cover included with delivery
- Did you know? Our floor scales are delivered in a robust wooden box. This protects the high-quality weighing technology from environmental influences and stresses during transportation. KERN – always one step ahead

# Technical data

- Large LCD display, digit height 25 mm
- Dimensions of display device W×D×H
- 235×115×52 mm
- Cable length of display device approx. 5 m
- Optional battery operation, 4×1.5 V AA not included in scope of delivery, operating time up to 60 h
- Net weight approx. 55 kg
- Permissible ambient temperature -10 °C/40 °C

### Accessories

- Protective working cover over the display device, scope of delivery: 5 items, KERN EOB-A04BS05, € 40,-
- Stand to elevate display device, height of stand approx. 1000 mm, can be reordered, KERN EOB-A02B, € 105,-

Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping costs

STANDARD								OPTION
	C	^-–	666		ВЩ		<b>.</b>	DAkkS
CAL EXT	UNIT	MOVE	IP 67	BATT	MULTI	DMS	2 DAYS	+3 DAYS
			1					

Model	Weighing capacity	Readability	Net weight	Price	Option	
				excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]	approx.	ex works	DAkkS	
KERN	kg	kg	kg	€	KERN	€
UIB 600K-1	600	0,2	55	910,-	963-130	173,-
UIB 1.5T-4	1500	0,5	55	910,-	963-130	173,-
UIB 3T-3	3000	1	55	910,-	963-132	460,-



High-resolution dual-range pallet scale with EC type approval [M] and a wide range of interfaces

# Features

11

- Dual-range pallet scale! Ideal, when high maximum loads need to be weighed, but in the lower load range you still need high resolution. This means that two scales can be replaced with one – which saves space and money!
- High mobility thanks to battery operation for
   display device and platform
- Load support: steel, powder coated, 4
- load cells, alloy steel, silicone-coated, IP67
- The scale can be easily transported using rollers and a handle and does not require much storage space
- Totalising of weights and piece counts
- Searching and remote control of the balance using external control devices or computers with the KERN Communication Protocol (KCP).
   KCP is a standardised interface command structure for KERN balances and other instruments which allows you to recall and

manage all relevant parameters and device functions. You can therefore simply connect KERN devices with KCP to computers, industrial control systems and other digital systems. In a large number of cases the KCP is compatible with the MT-SICS protocol.

- Due to interfaces such as RS-232 or USB, WiFi, Bluetooth, Ethernet (optional), the scale can easily be connected to existing networks. Data exchange between the scale, PC or printer
- · Protective working cover included with delivery

# **Technical data**

- Large LCD display, digit height 25 mm
- Dimensions of display device W×D×H 268×115×80 mm
- Cable length of display device approx. 5 m
- Net weight 44 kg
- Permissible ambient temperature -10 °C/40 °C

# Accessories

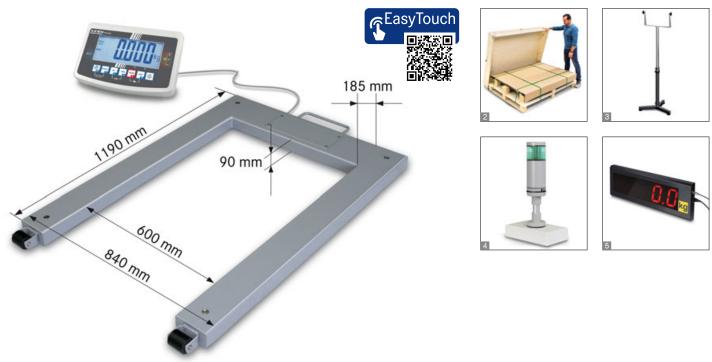
- Protective working cover, scope of delivery:
   5 items, KERN EOC-A01S05, € 40,-
- Stand to elevate display device, height of stand approx. 800 mm, KERN BFS-A07, € 140,-
- Internal rechargable battery pack, operating time up to 43 h without backlight, charging time approx. 3 h, KERN KFB-A01, € 35,-
- USB data interface, must be ordered at purchase, KERN KIB-A03, € 120,-
- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, must be ordered at purchase, KERN KIB-A04, € 110,-
- WiFi interface for wireless connection of the balance to networks and WiFi capable devices, such as tablets or laptops, continuous data transfer, must be ordered at purchase, KERN KIB-A10, € 120,-
- Ethernet data interface, to connect an IP-based Ethernet network, continuous data transfer, must be ordered at purchase, KERN KIB-A02, € 150,-
- Signal lamp, including interface, for visual support of weighing with tolerance range, must be ordered at purchase, KERN KIB-A06, € 390,-
- Alibi memory, including USB interface for exporting weighing results to external data storage media, such as, for example, USB sticks, hard drives, etc., KERN KIB-A01, € 150,-
- Verification plug, for verified balances this enables you to separate the display device and platform without affecting the verification, e.g. for installing the scale in a packing and dispatch table, pit frame etc. at a later date. Please order this at the same time as you purchase your scale, KERN KIB-A12, € 150,-

**Note:** In addition to the RS-232 interface, which is integrated as standard, only one other interface can be installed and operated

Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping costs

STANDAR	D														OPTION			FACTORY					
Т.	• 688. •	KCP	GLP	<b>.</b>		%	$\mathcal{C}$		^-–	666	666			<b></b> )	1		DAkkS		€ →	*	((:-	<u>_</u>	Μ
CAL EXT	RS 232	PROTOCOL	PRINTER	PCS	SUM	PERCENT	UNIT	TOL	MOVE	IP 65	IP 67	MULTI	DMS	2 DAYS	ET	ACCU	+3 DAYS	ALIBI	USB	BT 4.0	WIFI	LAN	+3 DAYS
										1	2												

Model	Weighing capacity	Readability	Price		(	Option			
		= Verification value	excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	rtificate		
	[Max]	[d] = [e]	ex works	MIII		DAkkS			
KERN	kg	kg	€	KERN	€	KERN	€		
UID 600K-1M	600	0,2	1050,-	965-230	132,-	963-130	173,-		
UID 1500K-1M	1500	0,5	1050,-	965-230	132,-	963-130	173,-		
UID 3000K-0M	3000	1	1050,-	965-232	200,-	963-132	460,-		
	Dual-range balance switches aut	omatically to the next largest weighing ca	pacity [Max] a	nd readibility	/ [d]				
UID 600K-1DM	300   600	0,1   0,2	1110,-	965-230	132,-	963-130	173,-		
UID 1500K-1DM	600   1500	0,2   0,5	1080,-	965-230	132,-	963-130	173,-		
UID 3000K-0DM	1500   3000	0,5   1	1080,-	965-232	200,-	963-132	460,-		
Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible.									
Verification at the factory, we need to know the full address of the location of use.									



# Pallet scale with steel load support (IP67) and EC type approval [M]

# Features

- · High mobility: thanks to rechargeable battery operation (optional), compact, lightweight construction, it is suitable for the use in several locations
- I Load support: steel, powder coated, 4 load cells, alloy steel, silicone-coated, IP67, Weighing bridge can also be delivered as component without the display device, for details see KERN KFU-V20
- · Two wheels for easy transportation of the scale
- Weighing with tolerance range (checkweighing): A visual and audible signal assists the rapid checking of items on palettes
- · Totalising of weights and piece counts
- · Protective working cover included with delivery
- 2 Did you know? Our floor scales are delivered in a robust wooden box. This protects the high-quality weighing technology from environmental influences and stresses during transportation. KERN - always one step ahead

# **Technical data**

- · Large backlit LCD display, digit height 52 mm
- Dimensions of display device W×D×H
- 250×160×58 mm · Cable length of display device approx. 5 m
- Net weight approx. 55 kg
- Permissible ambient temperature -10 °C/40 °C

# Accessories

- · Protective working cover, scope of delivery: 5 items, KERN KFB-A02S05, € 40,-
- Stand to elevate display device Column height approx. 800 mm, KERN BFS-A07, € 140,-
- Internal rechargeable battery pack, operating time up to 35 h without backlight, charging time approx. 12 h, not possible in combination with verification, KERN KFB-A01, € 35,-
- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, not in combination with verification. When installing the Bluetooth data interface, the RS-232 data interface can no longer be used, not possible in combination with RS 232 data interface, KERN KFB-A03, € 135,-

- · Analogue module, must be ordered at purchase, not possible in combination with signal lamp 0-10 V, KERN KFB-A04, € 100,-4-20 mA, KERN KFB-A05, € 100,-
- Isignal lamp for visual support of weighing with tolerance range, not possible in combination with analogue module, KERN CFS-A03, € 280,-
- 5 Large display with superior display size, KERN YKD-A02, € 260,-
- Y-cable for parallel connection of two terminal devices to the RS-232 interface on the scale, e.g. signal lamp and printer, KERN CFS-A04, € 35,-

11

- Cable with special length 15 m, between display device and platform, for verified models which must be ordered at the time of purchase, KERN BFB-A03, € 170,-
- · Further details, plenty of further accessories and suitable printers see Accessories

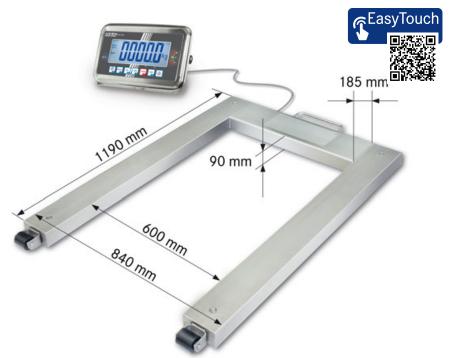
Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping costs



Model	Weighing capacity	Readability	Minimal load	Price		(	Option	
				excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	rtificate
	[Max]	[d]	[Min]	ex works	MIII		DAkkS	
KERN	kg	kg	kg	€	KERN	€	KERN	€
UFB 600K200M	600	0,2	4	1220,-	965-230	132,-	963-130	173,-
UFB 1.5T0.5M	1500	0,5	10	1220,-	965-230	132,-	963-130	173,-
Note: F	or applications that require	verification, please order ver	rification at the same time,	initial verificat	ion at a later	date is n	ot possible.	

Verification at the factory, we need to know the full address of the location of use.

Not possible in combination with RS 232 data interface











# Pallet scale with stainless steel load support (IP67) and stainless steel display device (IP65), with EC type approval [M]

# Features

11

- · High mobility: thanks to rechargeable battery operation, compact, lightweight construction, it is suitable for the use in several locations (production, warehouse, dispatch department etc.)
- 11 Load support: stainless steel,, extremely resistant to bending due to material thickness, 4 silicone-coated stainless steel load cells,
- protection against dust and water splashes IP67, weighing bridge can also be delivered as component without the display device, for details see KERN KFU-V30
- Your support in a HACCP-compliant quality system
- · Suitable for the ever-increasing hygienic requirements in the food industry
- 2 Display device: for details see KERN KFN-TM
- The scale can be easily transported using rollers and a handle and does not require much storage space
- · Hold function: When the weighing conditions are unstable, a stable weight is calculated determining an average value

- · Weighing with tolerance range (checkweighing): A visual and audible signal assists the rapid checking of items on palettes
- Totalising of weights
- · Internal rechargeable battery pack included with delivery
- I Did you know? Our floor scales are delivered in a robust wooden box. This protects the high-quality weighing technology from environmental influences and stresses during transportation. KERN - always one step ahead

# **Technical data**

- Large backlit LCD display, digit height 52 mm
- Dimensions of display device W×D×H 266×165×96 mm
- Cable length of display device approx. 5 m
- Net weight approx. 50 kg
- Permissible ambient temperature -10 °C/40 °C

# Accessories

- 4 Stand to elevate display device, height of stand approx. 800 mm, KERN BFN-A04, € 310,-Internal rechargeable battery pack, operating
- time up to 35 h without backlight, charging time approx. 10 h, KERN GAB-A04, € 40,-
- RS 232 data interface including interface cable, KERN KFN-A01, € 95,-
- · Bluetooth data interface, must be ordered at purchase, KERN KFB-A03, € 135,-
- Analogue module,
- 0-10 V: KERN KFB-A04, € 100,-4-20 mA: KERN KFB-A05, € 100,-
- 5 Large display with superior display size, only in combination with data interface KFN-A01, KERN YKD-A02, € 260,-
- Cable with special length 15 m, between display device and platform, for verified models which must be ordered at the time of purchase, KERN BFB-A03, € 170,-
- Further details, plenty of further accessories and suitable printers see Accessories

Limited tare range with verifiable models 1/6 from [Max]

Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping costs

Optionally configurable with IP68 display device on request, details see chapter 13

STANDARI	STANDARD									OPTION		FACTORY				
CAL EXT	KCP PROTOCOL	SUM	-√+ ⊙ Э» TOL		<b>66</b>	<b>66</b>	ACCU		DMS	2 DAYS	ET	DAkks +3 days	RS 232	BT 2.0	D/A ANALOG	H3 DAYS

	2							
Model	Weighing capacity	Readability	Minimal load	Price		(	Option	
		= Verification value		excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	rtificate
	[Max]	[d] = [e]	[Min]	ex works	MIII		DAkkS	
KERN	kg	kg	kg	€	KERN	€	KERN	€
UFN 600K200IPM	600	0,2	4	1690,-	965-230	132,-	963-130	173,-
UFN 1.5T0.5IPM	1500	0,5	10	1690,-	965-230	132,-	963-130	173,-
Note: F	or applications that require	verification, please order ver	rification at the same time,	initial verificat	ion at a later	date is r	ot possible.	
	Verifica	tion at the factory, we need	to know the full address of	the location o	f use.			











Compact, robust drive-through scale – particularly mobile thanks to its carrying handle, rollers and lightweight construction

# Features

- Drive-through scale for rapid weighing of e.g. wire cage trolleys, shelf trolleys, container trolleys, storage trolleys, sack trucks, transpallets, mobile containers, containers refuse etc.
- Low platform height and integrated access ramps on both sides facilitate access. No need for pit frame installation – which saves money
- Weighing bridge: Steel, powder coated, 4 silicon-coated aluminium load cells with protection against dust and water splashes to IP67
- • Level indicator for accurate levelling of the balance as standard
- Is Scale can be conveniently transported and stowed away in a space-saving manner by means of particularly sturdy industrial castors and a handle
- Wall mount for the display device, as standard, only for models without a column
- Protective working cover included with delivery
- Did you know? Our floor scales are delivered in a robust wooden box. This protects the high-quality weighing technology from environmental influences and stresses during transportation. KERN – always one step ahead

STANDARD								OPTION
T	C	^	666				<b>, , , , , , , , , , , , , , , , , , , </b>	DAkks
CAL EXT	UNIT	MOVE	IP 67	BATT	MULTI	DMS	2 DAYS	+3 DAYS
			1					

# **Technical data**

- · LCD display, digit height 25 mm
- Overall dimensions W×D×H 1066×1000×80 mm
- Very low clearance height drive-through area: 40 mm
- Dimensions weighing surface 800×800 mm
- Dimensions of display device W×D×H 235×114×51 mm
- Cable length of display device approx. 5 m
- Optional battery operation, 4×1.5 V AA not included in scope of delivery, operating time up to 60 h
- External mains adapter standard
- Permissible ambient temperature -10 °C/40 °C

### Accessories

- Protective working cover, scope of delivery:
   5 items, KERN EOB-A04BS05, € 40,-
- Pair of base plates to fix the weighing bridge to the floor, KERN BIC-A07, € 40,-

Model	Weighing capacity	Readability	Net weight	Price	Option	
				excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]	approx.	ex works	DAkkS	
KERN	kg	kg	kg	€	KERN	€
NIB 300K-1	300	0,1	40	760,-	963-129	122,-
NIB 600K-2	600	0,2	40	760,-	963-130	173,-



# Drive-through scale (IP67) with XXL display device and EC type approval [M]

# Features

STANDARD

- Drive-through scale for rapid weighing of e.g. wire cage trolleys, shelf trolleys, container trolleys, storage trolleys, sack trucks, transpallets, mobile containers, containers refuse etc.
- Low platform height and integrated access ramps on both sides facilitate access. No need for pit frame installation – which saves money
- Weighing bridge: out of anti-slip corrugated steel, 4 silicone-coated steel load cells, dust and spray protection IP67
  - Display device: for details see KERN KFB-TM
  - Protective working cover included with delivery
  - Did you know? Our floor scales are delivered in a robust wooden box. This protects the high-quality weighing technology from environmental influences and stresses during transportation. KERN – always one step ahead

# Technical data

- Large backlit LCD display, digit height 52 mm
- Overall dimensions W×D×H
   1600×1200×80 mm
- I 1600×1200×80 mm
  I 1800×1400×80 mm
- Platform height in the drive-through area: 80 mm
- Dimensions of weighing surface
   W×D 1000×1000 mm
   W×D 1200×1200 mm
- Dimensions of display device W×D×H 250×160×65 mm
- Cable length of display device approx. 5 m
- Permissible ambient temperature -10 °C/40 °C

# Accessories

- Protective working cover, scope of delivery:
   5 items, KERN KFB-A02S05, € 40,-
- Istand to elevate display device Column height approx. 800 mm,
   KERN BFS-A07, € 140,-
- Pair of base plates to fix the weighing bridge to the floor, KERN BFS-A06, € 70,-OPTION FACTORY









- Internal rechargeable battery pack, operating time up to 35 h without backlight, charging time approx. 10 h, must be ordered at purchase, KERN KFB-A01, € 35,-
- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, not in combination with verification. When installing the Bluetooth data interface, the RS-232 data interface can no longer be used, not possible in combination with RS 232 data interface, KERN KFB-A03, € 135,-
- Analogue module, must be ordered at purchase, not possible in combination with signal lamp 0–10 V: KERN KFB-A04, € 100, 4–20 mA: KERN KFB-A05, € 100,-
- I Signal lamp for visual support of weighing with tolerance range, not possible in combination with analogue module, KERN CFS-A03, € 280,-
- **I** Large display with superior display size, KERN YKD-A02, **€ 260,**-
- Y-cable for parallel connection of two terminal devices to the RS-232 interface on the scale, e.g. signal lamp and printer, KERN CFS-A04, € 35,-
- Cable with special length 15 m, between display device and platform, for verified models which must be ordered at the time of purchase, KERN BFB-A03, € 170,-

**Note:** For verified scales the weighing bridge must be fixed to the floor. Optionally, with an access ramp, a footplate pair or a pit frame

Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping costs

CAL EXT	• ###A • RS 232	KCP Protocol	PCS	SUM	-√+ ⊙ Э» TOL	∧- <b></b> MOVE	<b>000</b> IP 67	DMS	2 DAYS	ET	DAkks +3 DAYS	BT 2.0	D/A ANALOG	ACCU	H3 DAYS

Model	Weighing	Readability	Minimal load	Net weight	Weighing plate	Price		(	Option	
	capacity	= Verification value				excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	rtificate
	[Max]	[d] = [e]	[Min]	approx.		ex works	MIII		DAkkS	
KERN	kg	kg	kg	kg		€	KERN	€	KERN	€
NFB 600K200M	600	0,2	4	130	A	1790,-	965-230	132,-	963-130	173,-
NFB 600K200LM	600	0,2	4	165	В	2090,-	965-230	132,-	963-130	173,-
NFB 1.5T0.5M	1500	0,5	10	130	A	1790,-	965-230	132,-	963-130	173,-
NFB 1.5T0.5LM	1500	0,5	10	155	В	2090,-	965-230	132,-	963-130	173,-
Note: F	or applications t	hat require verific	ation, please ord	er verification at	the same time, i	nitial verificat	ion at a later	date is n	ot possible.	

Verification at the factory, we need to know the full address of the location of use.



# Stainless steel drive-through scale (IP68) with stainless steel display device (IP65), with EC type approval [M]

# Features

- Robust stainless steel drive-through scale for rapid weighing of e.g. laundry carts, container trolleys, roller containers, etc.
   Ideal for hospital laundry services, goods inwards, hospital kitchens, etc.
- Low platform height and integrated access ramps on both sides facilitate access. No need for pit frame installation – which saves money
- Ideal for the increased hygienic requirements in the food, pharmaceutical and chemical industries
- Weighing bridge: stainless steel, extremely resistant to bending due to material thickness, 4 welded stainless steel load cells, dust and spray protection IP68. Weighing bridge can also be delivered as component without the display device, for details see KERN KFD-V40
- Your support in a HACCP-compliant quality system
- 2 Display device: for details see KERN KFN-TM
- Totalising of weights and piece counts
- Internal rechargeable battery pack included with delivery

 Did you know? Our floor scales are delivered in a robust wooden box. This protects the high-quality weighing technology from environmental influences and stresses during transportation. KERN – always one step ahead

# **Technical data**

- Large backlit LCD display, digit height 52 mm
- Overall dimensions W×D×H 1600×1200×80 mm
- Platform height in the drive-through area: 80 mm
- Dimensions weighing surface W×D 1000×1000 mm
- Dimensions of display device W×D×H 266×165×96 mm
- Cable length of display device approx. 5 m
- Permissible ambient temperature -10 °C/40 °C







# Accessories

- Stand to elevate display device, height of stand approx. 800 mm, KERN BFN-A04, € 310,Pair of base plates to fix the weighing bridge to the floor, KERN BFN-A03, € 85,-
- Internal rechargable battery pack, operating time up to 35 h without backlight, charging time approx. 12 h, KERN GAB-A04, € 40,-
- Data interface RS-232, interface cable included, approx. 1,5 m, must be ordered at purchase, KERN KFN-A01, € 95,-
- Bluetooth data interface, must be ordered at purchase, KERN KFB-A03, € 135,Analogue module,
- 0-10 V: KERN KFB-A04, € 100,-4-20 mA: KERN KFB-A05, € 100,-
- Is Large display with superior display size, only in combination with data interface KFN-A01, KERN YKD-A02, € 260,-
- Cable with special length 15 m, between display device and platform, for verified models which must be ordered at the time of purchase, KERN BFB-A03, € 170,-

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 Further details, plenty of further accessories and suitable printers see Accessories

**Note:** For verified scales the weighing bridge must be fixed to the floor. Optionally, with an access ramp, a footplate pair or a pit frame

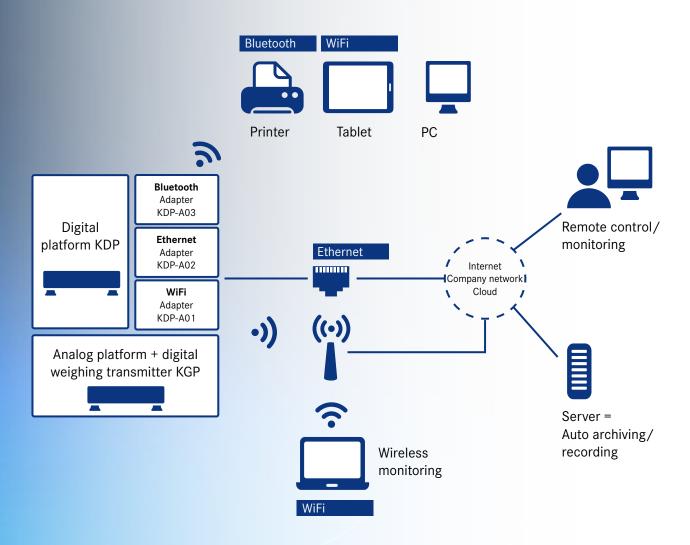
Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping costs

Optionally configurable with IP68 display device on request, details see chapter 13

STANDARD		OPTION	FACTORY
KCP         Image: Cale ext protocol         PROTocol         PCS         SUM         Image: Cale ext protocol         Move         Move         Ip 65	IP 68     ACU     MULTI     DMS     2 DAYS	ET DAkks	RS 232 BT 2.0
2	F1		

Model	Weighing capacity	Readability	Minimal load	Net weight	Price		(	Option	
		= Verification value			excl. of VAT	Verifica	tion	DAkkS Calibr. Ce	ertificate
	[Max]	[d] = [e]	[Min]	approx.	ex works	MIII		DAkkS	
KERN	kg	kg	kg	kg	€	KERN	€	KERN	€
NFN 600K-1M	600	0,2	4	130	3350,-	965-230	132,-	963-130	173,-
NFN 1.5T-4M	1500	0,5	10	125	3390,-	965-230	132,-	963-130	173,-
Note: F	or applications that r	equire verification, pl	ease order verificatio	on at the same time,	initial verificat	ion at a later	date is r	ot possible.	
		Verification at the fac	tory, we need to kno	w the full address of	the location o	f use.			

# Weighing Systems Industry 4.0



We will help to combine industrial production with the latest information and communication technology, with the aim of improving quality, reducing costs and using time and resources more efficiently so that you are able to react to future requirements in a more flexible manner. You will benefit from our uniform data protocol combined with our BalanceConnection 4.0 data software, for details please see page 168/169.

# The KERN team in our centre of expertise – Industry 4.0



We would like to inform and advise you

Tel. +49 7433 9933-200 ITsupport@kern-sohn.com

# Industrial platform scale with digital weighing transmitter KERN KGP



Robust industrial platform scale with digital weighing transmitter, ideal for varied range of applications for Industry 4.0

### Features

- With this combination of II platform (KERN KFP V20 IP65) and digital weighing transmitter (KERN YKV-01) your weighing processes are ready for the requirements of Industry 4.0. Simply install the platform, connect the digital weighing transmitter to the network and start weighing
- For rapid transfer of weighing data to connected networks, computers, etc.
- USB and RS-232 data interface standard, Power supply via USB interface
- Transfer formats are freely configurable
- Functions: Weighing, taring
- Internal resolution 16 million divisions
- Measurement frequency 10 Hz
- · Easy configuration using the software supplied
- KERN YKV-01: Robust plastic die-cast housing
- KERN YKV-01: Suitable for wall mounting and DIN track mount (optional)

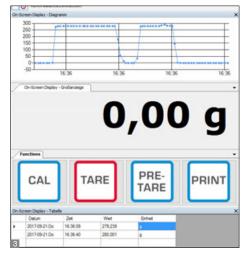
- Included with delivery:
- Industrial platform KERN KFP
- Digital weighing transmitter KERN YKV-01
- DIN rail mounting bracket
- Configuration software for adjusting and managing the KERN KDP, for large-format display of the values collected on the PC as well as transfer of this data to other Apps and programs. The displayed result can therefore be converted to any format for communication with the different user programs, such as, for example, e.g. SAP, Oracle etc.

### Technical Data

- · Weighing plate material stainless steel
- KERN YKV: Overall dimensions W×D×H 100×127×28 mm
- Permissible ambient temperature -10 °C/ 40 °C







# Accessories

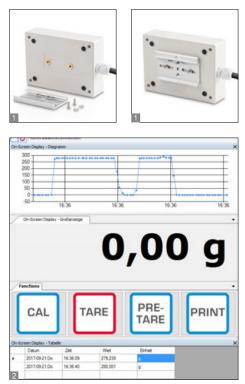
- Bluetooth data interface, KERN YKV-A02, € 90,-
- WiFi data interface, KERN YKV-A01, € 90,-
- Ethernet data interface on request
- ■ DIN rail mounting bracket for KERN YKV, KERN YKV-A03, € 60,-
- I Software BalanceConnection, flexible recording or transfer of measurements, particularly to Microsoft<sup>®</sup> Excel or Access as well as transfer of this data to other Apps and programs. The displayed result can therefore be converted to any format for communication with the different user programs, such as, for example, e.g. SAP, for details see page 168, KERN SCD-4.0, € 170,-

STANDARD							OPTION		FACTORY			
		KCP	C	666			1	DAkkS	8	((:-	<u>-</u>	
CAL EXT RS 2	32 USB	PROTOCOL	UNIT	IP 65	DMS	1 DAY	ET	+3 DAYS	BT 4.0	WIFI	LAN	
				1								

Model	Weighing capacity	Read-out	Weighing plate	Cable length	Net weight	Price	Options	3
				_	approx.	excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]				ex works	DAkkS	
KERN	kg	g	mm	m	kg	€	KERN	€
KGP 6K-4	6	0,2	300×240×120	3	6	430,-	963-128	99,-
KGP 6K-4L	6	0,2	400×300×128	3	10	450,-	963-128	99,-
KGP 10K-4	15	0,5	300×240×120	3	6	450,-	963-128	99,-
KGP 10K-4L	15	0,5	400×300×128	3	10	490,-	963-128	99,-
KGP 30K-3	30	1	300×240×120	3	6	450,-	963-128	99,-
KGP 30K-3L	30	1	400×300×128	3	10	490,-	963-128	99,-
KGP 60K-3	60	2	400×300×128	3	10	520,-	963-129	122,-
KGP 60K-3L	60	2	500×400×137	3	13	580,-	963-129	122,-
KGP 100K-3	150	5	500×400×137	3	14	580,-	963-129	122,-
KGP 100K-3L	150	5	650×500×142	3	22	780,-	963-129	122,-
KGP 300K-2L	300	10	650×500×142	3	22	780,-	963-129	122,-

Digital weighing transmitter KERN YKV





Modern digital weighing transmitter for the rapid recording of weighing data and forwarding it to the most varied output channels such as tablets, networks, SPS controllers, etc. - ideal for operating balances in systems or conveyors

# Features

- · With this digital weighing transmitter your weighing processes are ready for the requirements of Industry 4.0. Simply connect a weighing platform or measuring cell, integrate the digital weighing transmitter into the network and start weighing
- For rapid transfer of weighing data to connected networks, computers, etc.
- USB and RS-232 data interface standard, Power supply via USB interface
- Transfer formats are freely configurable
- Functions: Weighing, taring
- 12 . Measuring frequency 10 Hz
  - · Easy configuration using the software supplied
  - Robust plastic die-cast housing
  - I Suitable for wall mounting and DIN track mount
  - · Compatible with all KERN weighing platforms

- · Included with delivery:
- Industrial platform KERN KFP
- USB cable incl. mains plug
- DIN rail mounting bracket
- Digital weighing transmitter KERN YKV-01
- 2 Configuration software for adjusting and managing the KERN KDP, for large-format display of the values collected on the PC as well as transfer of this data to other Apps and programs. The displayed result can therefore be converted to any format for communication with the different user programs, such as, for example, e.g. SAP, Oracle etc.

### **Technical Data**

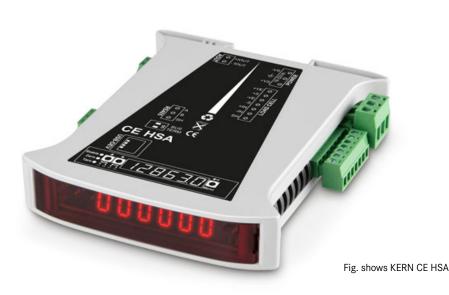
- Overall dimensions W×D×H 100×127×28 mm
- Net weight approx. 1,2 kg
- · Permissible ambient temperature -10 °C/40 °C

### Accessories

- · Bluetooth data interface, KERN YKV-A02, € 90,-
- WiFi data interface, KERN YKV-A01, € 90,-
- DIN rail mounting bracket for KERN YKV, KERN YKV-A03, € 60,-
- Software BalanceConnection, flexible recording or transfer of measurements, particularly to Microsoft® Excel or Access as well as transfer of this data to other Apps and programs. The displayed result can therefore be converted to any format for communication with the different user programs, such as, for example, e.g. SAP, for details see page 168, KERN SCD-4.0, € 170,-

STANDARD	)							FACTORY	
		•	군무	KCP	GLP	3		*	((:-
CAL EXT	RS 232	USB	LAN	PROTOCOL	PRINTER	UNIT	1 DAY	BT 4.0	WIFI
			YKV-02						

Model	Standard interfaces	Price
		excl. of VAT
		ex works
KERN		€
YKV-01	RS-232, USB	200,-
YKV-02	RS-232, USB, Ethernet	250,-



# Super compact display device (rail-mounted module) for installation in switch cabinets

### Features

Features

- · Compact display unit for recording weighing data using strain gauge load cells, e.g. in industrial applications
- Due to its small size, it is particularly space-saving to install in switch cabinets
- Thanks to the many interface variants, the modules can be ideally integrated into existing infrastructures and systems
- A The modules can be used either individually or as a Buslink system with a total of up to 332 DIN rail modules
- · The configuration of the module can be carried out conveniently via a connected PC with the suitable software (Download see Internet)
- · Bright LED display for optical control and settings
- Time-saving G-Cal™ (Geographic Calibration) technology for fast and accurate calibration without weights conveniently over a network or the Internet worldwide
- · Convenient communication via remote devices
- Backup and restore function via USB port
- · Can handle various industrial protocols such as Ethernet IP, Modbus TCP, Modbus RTU, FINS and Profibus DP

Model KERN

· Extremely high measurement frequency possible, up to 1600 data records/s Internal resolution 24 Bit

# Technical Data

- LCD display, digit height 7,6 mm
- Dimensions W×D×H 101×120×22,5 mm
- Permissible ambient temperature -10 °C/40°C

### Accessories

 Mains adapter for power supply of the KERN CE HS, mountable on DIN rail, KERN CE HSS, € 80,-

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reatures			WODEL KERN		
	CE HSA	CE HSE	CE HSN	CE HSP	CE HSR
Power supply	18-32 Vdc; 4 W max.				
Load cell power supply	5 Vdc				
Sensitivity	0,1 µV/d				
Adjustable nominal sensitivity	1; 1.5; 2; 2.5; 3 mV/V				
Input voltage Unipolar @3mV/V	-1 mV to +16 mV				
Input voltage Bipolar @3mV/V	-16 mV to +16 mV				
A/D Conversion speed	1600/s	1600/s	1600/s	1600/s	1600/s
Max. load cell impedance	1200Ω	1200Ω	1200Ω	1200Ω	1200Ω
Min. load cell impedance	43,75 Ω				
Max. no. of load cells 350 $\boldsymbol{\Omega}$	8	8	8	8	8
Max. no. of load cells 1000 $\boldsymbol{\Omega}$	22	22	22	22	22
Max. number of d	10.000	10.000	10.000	10.000	10.000
Display steps	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200	1,2,5,10,20,50,100,200
Communication/Interfaces	USB	USB, Ethernet	USB, PROFINET	USB, PROFIBUS	USB, RS-232/-422
Analog output	0/4-20/24mA	-	-	-	-
Dimensions W×D×H	120×110×22 mm				
Net weight g	150	150	150	150	150
Price excl. of VAT ex works €	480,-	540,-	540,-	540,-	510,-

II Models also available with verification approval, please enquire

www.kern-sohn.com · Order hotline +49 7433 9933-0









# Your contact for technical questions



Tel. +49 7433 9933-214 stefan.herrmann@kern-sohn.com



# 

# Universal weighing platforms for flexible connection into process chains

# Features

12

STANDARD

CAL EXT

USB

PROTOCOL

- Industry 4.0 process chains: these weighing platforms can be easily integrated into your process chain. All recorded values can be easily transferred and processed further in your system as digital data and data that has already been compared using the many interfaces available. This saves cost, time and resources and ensures even more effective working
- Connecting the balance with a tablet or PC offers the advantage of being able to use the
- apps and programs which are on that device. These apps and programs are usually already tailored to your needs, are easy and convenient to use and can often be expanded as needed. This offers you the maximum level of flexibility when displaying, processing and saving the recorded weighing data
- Searching and remote control of the balance using external control devices or computers with the KERN Communication Protocol (KCP).
   KCP is a standardised interface command

structure for KERN balances and other instruments which allows you to recall and manage all relevant parameters and device functions. You can therefore simply connect KERN devices with KCP to computers, industrial control systems and other digital systems. In a large number of cases the KCP is compatible with the MT-SICS protocol

- PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels
- Freely programmable weighing unit, e.g. display direct in special units such as length of thread g/m, paper weight g/m<sup>2</sup>, or similar
- Draught shield standard for models with weighing plate size A, weighing space W×D×H 146×146×80 mm
- Included with delivery:
   Software BalanceConnection for adjusting and managing the KERN KDP, for large-format display of the values collected on the PC as

well as transfer of this data to other Apps

and programs

FACTORY

₿

OPTION

DAkks

+3 DAYS

# Technical Data

- Dimensions weighing surface
   ▲ Ø 105 mm
- W×D 160×160 mm, see larger pictureWeighing plate material
- A plastic, with conductive lacquerB stainless steel
- Overall dimensions W×D×H 165×166×75 mm (without draught shield)
- Cable length approx. 1,2 m
- Net weight approx. 1,2 kg
- Permissible ambient temperature 5 °C / 35 °C

# Accessories

- Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, KERN KDP-A03, € 50,-
- WiFi interface for wireless connection of the balance to networks and WiFi capable devices, such as tablets or laptops, must be ordered at purchase, please ask for delivery time, KERN YMI-A01, € 90,-
- Ethernet data interface, to connect an IP-based Ethernet network, must be ordered at purchase, not in combination with verification, KERN KDP-A02, € 110,-

Model	Weighing capacity	Read-out	Reproducibility	Linearity	Weighing plate	Price	Options	
						excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]				ex works	DAkkS	
KERN	g	g	g	g	mm	€	KERN	€
KDP 300-3	350	0,001	0,002	± 0,005	А	450,-	963-127	82,-
KDP 3000-2	3500	0,01	0,02	± 0,05	В	450,-	963-127	82,-
KDP 10K-4	10000	0,1	0,1	± 0,3	В	420,-	963-128	99,-
KDP 10K-3	10000	1	1	± 3	В	400,-	963-128	99,-

# Welcome to the new age of weighing

The KERN EasyTouch software combines the performance of KERN scales with the flexibility of a Windows or Android environment

Find out more about the whole new world of weighing with KERN EasyTouch on the following pages ...



See for yourself how convenient and easy it is to use KERN EasyTouch

# EasyTouch

FasyTouch 22201-2020

1

E

C

B

0.00 s

Min 08 Max 35 K8

# KERN EasyTouch App



# The modular system solution for efficient weighing – perfect for your individual requirements

# Just imagine, ...

- ... You only pay for functions which you actually use.
- ... You could develop the range of services of your balance to meet your requirements, whenever you want.
- ... You could easily control your balance from wherever you happen to be, in the laboratory, in production, in the office.
- ... You could do this from a PC or tablet.
- ... You could save the weighing data from your balances in a tamper-proof manner on a central server, whereby all the data is systematically stored in a database.

# Then the KERN EasyTouch App (SET) is the perfect solution for you.



Large clear display for optimum view even under poor environmental conditions.

All installed functions are clearly arranged, enabling lightning-fast switching between functions.

# The functions can be adapted extensively to meet your particular requirements.



# Upgrade your scale into a powerful weighing system

Using the KERN EasyTouch App even a simple single scale can be transformed into a powerful weighing system, which offers a range of functions. To do this you simply have to install the KERN EasyTouch App on your PC or tablet (Windows® or Android®), connect the balance (either with cable or wireless), activate the App and straightaway you will be able to control your balance using your PC or tablet.

In order to find out about the many advantages of the KERN EasyTouch App, you can download a demo version of the App which contains the full range of functions, i.e. you can get started straightaway and test all the functions in your own time!

# In addition to the pre-installed functions the KERN EasyTouch App offers these additional handy functions:

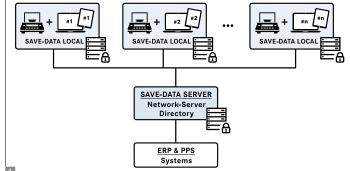
- Large database for item master data, container weights, product images etc.
- Large database for dynamic weighing data (tamper-proof measurement value memory, logging of changes to master data, high level of data integrity, etc.)
- Access to the large database from all KERN EasyTouch functions
- Storage facility for an individual ID number or an object name for each weighing process or object in the tamper-proof Measurement value memory
- · User ID with date and time is also saved for each weighing process
- Individual user administration (Administrator, User, permissions, ...), cross-functional

- Application of different weighing scales in one workflow (e.g. formulation or counting) possible, with full data-traceablility (what item was measured on which weighing device)
- A large range of menu languages (DE, EN, FR, IT, ES, other languages on request)
- Individual print formats for printouts, including use of logos and free text
- It is possible to read barcodes using the connected barcode scanner
- All recorded weights can be printed from the individual functions using a connected network printer
- Convenient initial reading of large amounts of data, e.g. from an ERP, PPS, ... system, e.g. SAP®, and permanent synchronization of weighing and measurement data between the connected measuring instruments and the ERP, PPS, ... systems, e.g. SAP
- Compatible with Bluetooth 2.0 and 4.0
- Your KERN EasyTouch system can be expanded with many more, useful functions, which will make your daily work easier. Please see the table below or visit www.kern-sohn.com for information about all available functions

# Can't find the function you need or you have a particularly specific application?

Then you can simply program your own customised function – or just ask us, our team of software specialists will be happy to help you.







Test it – completely without risk!

# simple

Simply download the KERN EasyTouch software from the Microsoft Store<sup>®</sup> or Google Play<sup>®</sup>.

The KERN EasyTouch software already contains **all available functions** right from the start.

# ▶ tailor-made

The **"Basic Weighing Package"** contains full database functionality. In addition they form the starting point for activating all other KERN EasyTouch functions. SET-01 OS forms the operating system with extensive basic functions. The operating system is the prerequisite for all other KERN EasyTouch Apps. All other apps can be customised on the basis of SET-01 OS.

# ► easy

# Test it for 4 weeks, without obligation and free of charge!

After 4 weeks the functions go into sleep mode and you decide which functions you want to activate.

# extensive

Every purchased function license allows:

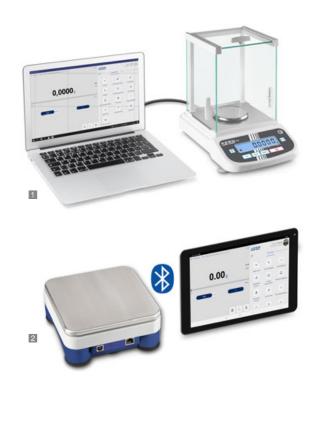
- 4 installations on PC or tablet
- $\boldsymbol{\cdot}$  the installation of an unlimited number of scales, measuring cells etc.
- as well as use by as many users as you want
- for an unlimited period

# KERN EasyTouch App – summary of all functions

S Function	Application	Price
ET OS – Operating system Basic Weighing & Laboratory Package	(Mandatory for initial installation) Weighing, totalising (REZ A), targeted dispensing, percentage weighing	SET-01
ET Lab-Set	Contains: ET Recipe function (SET-21) + ET Difference function (SET-22)	€ 890,- SET-02
Premium Laboratory Package		€ 370,-
ET Formulation	User administration (Administrator, User, etc.), recipe administration, component administration,	SET-21
Recipe function	targeted dispensing, multiplier function for the production of larger containers, bulk packs, etc., Adjustment of recipe when dosages are exceeded, recipe interrupt function Basic batch management, printout, etc.	€ 350,-
ET Difference Difference function	Monitoring function e.g. for monitoring the growth of biological cell cultures (monitoring of defined series of test through regular weighing in defined periods of time), the weight differences are calculated automatically and a graphic growth pattern is displayed and stored, automatic sample pan recognition by barcode is possible	SET-22 € 180,-
<b>ET Industry set</b> Premium Industrial Package	Contains: <b>ET Tolerance weighing function</b> (SET-31) + <b>ET Piece-countingfunction</b> (SET-32) + <b>ET Target-counting function</b> (SET-33)	SET-03 € 420,-
ET Tolerance Tolerance weighing function	Master data administration of items and their tolerances, numeric or percentage entry of the tolerance based on the target weight or limits, weighing process is supported audibly and with a colour bar graph, each weighing result can be stored with an ID number of the particular object (batch management)	SET-31 € 280,-
<b>ET Count</b> Piece-counting function	Master data administration of items with name in clear text, ID number, reference weight and tare weight, rapid counting function, can be a counting system, each weighing result can be stored with ID number of the particular object (batch management)	SET-32 € 280,-
ET Target-Count Target-counting function	Fill-to-target function: Target count or target weight can be programmed. When the target weight is reached there is an audible and visual signal, numeric or percentage entry of the tolerance based on the target weight or limits, master data administration of items with name in clear text, ID no., reference weight and tare weight, weighing result can be stored with an ID number of the particular object (batch management	SET-33 € 280,-
E <b>T Density</b> Density determination function	Guidance through density determination of solid matter and liquids is particularly user-friendly and uses graphics, the density is calculated and output immediately	SET-04 € 180,-
ET Dynamic Animal and dynamic weighing function	Rapid entry facility for the time interval for a dynamic weighing process in seconds. Calculation of the average weight using the time interval which has been entered, also ideal for weighing where the weighing conditions are unstable	SET-05 € 55,-
ET Classify Classification function	Classification function for sorting objects into weight classes, you can name the classes as you wish, a further information field can be assigned to each class, e.g. price, etc., master data administration of items and their classes, the weighing result can be stored with an ID number of the particular object (batch management)	SET-06 € 180,-
<b>ET Variable</b> Free variable function	Free conversion function of the weight collected unit which can be individually named and defined (e.g. g/m = surface weight), output of the weight immediately in the defined unit, master data administration of items, the weighing result can be stored with an ID number of the particular object (batch management)	SET-07 € 65,-
<b>ET Take-out</b> Take-out function	Allows negative weighing (with take-out) from a source container, which is on the balance, visual and audible support of the take-out procedure, weight or piece display possible, statistical evaluation possible, such as, for example, average weight of the portions which have been taken out, total number of pieces which have been taken out, waste, etc., master data administration of items, the weighing result can be stored with an ID number of the particular object (batch management)	SET-08 € 180,-
ET Save-server Weight storage + Save-Server function	Allows the recorded weighing data to be saved in a shared folder or server workspace, for example	SET-10 € 900,-
ET Save-cloud Weight storage + Save-Server function in the Cloud	Central storage of weights and measurement data from different workplaces in the Cloud, tamper-proof	SET-101 € 30,-/ month
<b>ET Safety</b> Precision & Safety function	<ul> <li>Regular calibration function with individually specified test loads and defined tolerances. Warning and switch-off function, if test weighings are outside the tolerances. E.g. daily tests at defined test points with defined tolerance</li> <li>Management of the test weights used for the test with individual process time periods for each test weight, warning and switch-off function for invalid test weights</li> <li>Monitoring of the minimum sample weight (MinWeight = smallest weight to be weighed), warning and switch-off function for weighings below the permitted minimum weight</li> <li>Management of the verification or calibration of the balance used with individual process time periods for each balance, warning and switch-off function if the verification validity period or the defined recalibration period is exceeded</li> </ul>	SET-11 € 550,-



**Weighing the easy way** – Do you want to store weighing data digitally, simply but secure? You want your users to be supported in their weighing processes? You want to reduce or avoid measuring errors and process errors? Then extend the range of functions of your scale with the KERN EasyTouch App. Whether for complex recipes, for exact piece counting or for fast and effective portioning – KERN EasyTouch always has the right function. Faster working, more comfortable data management and higher process reliability are only some of the benefits of KERN EasyTouch – weighing the easy way.



Connection possibilities KERN EasyTouch: wired via an RS-232 interface wireless via Bluetooth  Suitable RS-232/USB adapter for connecting a tablet, PC etc. to scales or measuring instruments with RS-232 output, KERN AFH 13,
 € 95,-



# The new KERN EasyTouch app – available right now for the following KERN ranges/models:

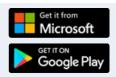
	KERN Balanc	es and Weighing plat	forms	Scales from other manufacturers
440	DS	IXS	PNS/PNJ	Precisa Gravimetrics AG, CH
572/573	EG-N	KDP	SFB	Mettler-Toledo International Inc., USA, CH
ADB / ADJ	EW-N	KGP	SXS	
ALS/ALJ	FCB	NFN	UFA	
BFB	FKB	NFB	UIB	
BFN	GAB	РСВ	UID	
BID <sup>(1)</sup>	IFB	PCD	KFB-TM	
CFS	IFS	PES/PEJ	<b>KIB-TM</b> <sup>(1)</sup>	
СКЕ	IOC (1)	PLS/PLJ	KXS-TM	

<sup>(1)</sup> Verified operation: Weighing data from legally regulated uses can be stored and archived in KERN EasyTouch in conformity with standards, by using models from this product family with valid calibration and measurement value memory. This standardcompliant data storage also applies to SaveServer and SaveCloud.

Other KERN ranges can be adapted to be EasyTouch compatible – keep up-to-date with the latest new on **www.kern-sohn.com** 



KERN EasyTouch App – available in the Microsoft Store<sup>®</sup> (Windows<sup>®</sup> version) or in the Google Play Store<sup>®</sup> (Android<sup>™</sup> version)



All details about the new KERN EasyTouch App can be found at **www.kern-sohn.com/EasyTouch** 







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lna Reger Edgar Litti Daniel Egeler

Our KERN EasyTouch specialists will gladly inform and advise you on all questions regarding the new KERN EasyTouch App

Tel. +49 7433 9933-200 ETsales@kern-sohn.com

# **Display devices/Platforms/Weighing bridges**

# Putting together individual weighing systems which cannot be verified

KERN offers a range of KERN display devices and KERN weighing units, such as platform scales, floor scales, pallet scales and drive-through scales, which you can put together to make your ideal scale. You choose the components, KERN handles the rest.

# Assembly

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KERN delivers the complete scale which is ready to use. Prices for assembly can be found in the "Assembly" price table. On request we can also create a calibration certificate in accordance with DAkkS/DKD at an additional price, see page 202 ff.

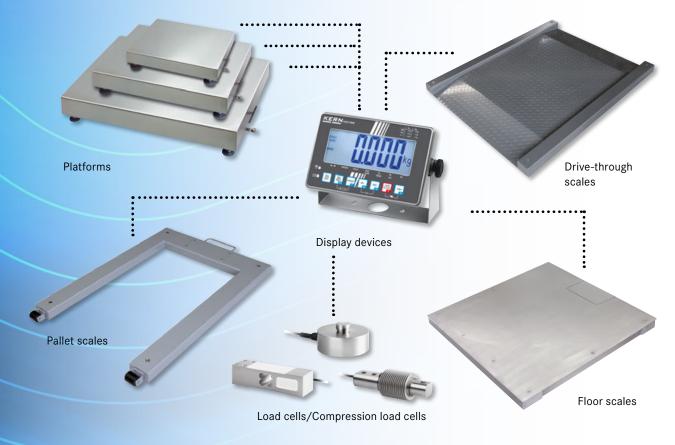
# Putting together individual weighing systems which can be verified or are verified

In order to provide the complete package, as well as assembling your individual weighing system, KERN will also carry out the manufacturer's initial verification/evaluation for conformity in accordance with EC directives as a commercial scales of verification class III.

In accordance with the European verification regulations, when assembling a display device with a weighing unit you must take the following notes into account:

- Only elements which can be verified with type approval or OIML test certificate can be combined into a weighing system which can be verified. Possible models are marked with "M".
- Platforms with load cells, provided as third-party products which have an OIML test certificate can be included.
- It will not be possible to carry out verification at a later date, e.g. after assembly and delivery of the weighing system.
   So please order the verification at the same time as you order the weighing system.

You will find a wide variety of display devices, platforms, weighing bridges, etc. in KERN's product range and these can be put together to create your ideal scale. You simply choose the components, KERN handles the rest.



# The individual KERN steps:

1. Proof of compatibility This is mandatory by law and includes testing by using type approvals, whether the connection values of the display device match the connection	Weighing capacity 0 up kg	Model	Price excl. of VAT, ex works €
data of the weighing unit.	all Weighing capacities	965-240	45,-
2. Assembly	up ≤ 50 kg	965-411	70,-
After testing for suitability using the proof of compatibility, the weighing	$up \leq 350 \text{ kg}$	965-412	100,-
system will be hard wired by KERN. The weighing system will then be tested	$up \le 1500 \text{ kg}$	965-413	120,-
in accordance with regulations of 2014/31/EU, the European directive for non-automatic weighing instruments and prepared for conformity assessment.	up ≤ 2900 kg	965-414	150,-
	up ≤ 6000 kg	965-415	250,-
3. Initial verification by the manufacturer	up≤5 kg	965-227	55,-
Conformity assessment ("Initial verification by the manufacturer")	up ≤ 50 kg	965-228	70,-
KERN is authorised to carry out the conformity assessment ("initial verification	up ≤ 350 kg	965-229	93,-
by the manufacturer") in accordance with 2014/31/EU, the European directive	up ≤ 1500 kg	965-230	132,-
for non-automatic weighing instruments and is therefore authorised to introduce the weighing system onto the market, after the test has been carried	up ≤ 2900 kg	965-231	150,-
out successfully and the conformity mark has been affixed.	up ≤ 6000 kg	965-232	200,-
4. Declaration of conformity			
KERN issues this after the initial verification by the manufacturer Conformity assessment has been carried out successfully and sends it with the weighing			

# Modifications and special services

Description	Model	Price excl. of VAT, ex works €
Cable extensions for platform scales		
up to 4 m extension	965-403	45,-
up to 7 m extension	965-404	60,-
up to 20 m extension	965-405	75,-
Individual settings	· · · · · · · · · · · · · · · · · · ·	
Scale with NAWI conformity evaluation, only in combination with KERN 965-240	965-401	50,-
Other adjustments in the balance or software changes	965-407	95,-/h
Plug connection (replaces the fixed cable connection between the display device and platform	n with a plug connection which can be	e disconnected)
balances with type approval and verification (according to time spent)	plug connection (e.g. KERN KIB-A1 models (e.g. IOC,	h separable, verifiable with identification chip 2), for the corresponding BID, UID) please order purchasing
balances with type approval, no verification	965-406	60,-

Delivery time for modifications & special services approx. 5-8 working days

# Order example

<b>(FP 30V20M</b> platform and <b>KEN-TM</b> display device with able extension (4 m) and setting an individual preload.	KERN	Price excl. of VAT, ex works €
ERN platform	KFP 30V20M	275,-
KERN display device	KFN-TM	330,-
Proof of compatibility	965-240	45,-
Cable extension	965-403	45,-
Setting the preload	965-401	50,-
Assembly	965-411	70,-
Verification at the factory KERN	965-228	70,-
Complete scale (verified)	· · · · · ·	800,-



# That's how it fits!

High-performance scales and efficient weighing systems that support and advance your work should be adapted to your individual requirements. Standard models may not be sufficient for this. For this reason, we are happy to work with you to develop the right, target-oriented scale.

Together with your engineers and users we check the special requirements of your application and design the appropriate platform or floor scales for it.

Our competent team is at your disposal and is looking forward to your project. Please feel free to call or write us.

Tel: +49 7433 9933-570 E-Mail: cusos@kern-sohn.com







Max Matthes

Ralf Schmieg

.

Fabian Brenner

# Display devices KERN KFB-TM · KFS-TM



# KERN KFB-TM

Display device with large digits – easy to read and optional analogue output for controlling systems (PLC) etc.



# KERN KFS-TM

Professional indicator with 3 displays, also with EC type approval [M]



to see what options are offered by this display device, please see the KERN platform scale IFB on page 97 Tip

to see what options are offered by this display device, please see the KERN counting scale IFS on page 78

STANDARD			STANDARD		
CAL EXT	GLP	SUM UNIT TOL	CAL EXT MEMORY RS 232	KCP GLP PROTOCOL INTERN PCS	
STANDARD	OPTION	FACTORY	STANDARD	OPTION	FACTORY
	ET ACCU	BT 2.0 ANALOG	TOL	ET ACCU	М

 not possible in combination with verification. When installing the Bluetooth data interface, the RS-232 data interface can no longer be used
 \*\* not possible in combination with signal lamp. When installing the analogue module, the RS-232 data interface can no longer be used

Features	Model KERN	Model KERN
	1 KFB-TM	KERN KFS-TM
Display (segments)	5 + 1/2 digits	6 digits
EC type approval	yes	yes
Resolution verifiable	6000 e	3000 e
Resolution non verifiable	30000 d	60000 d
Weighing capacities	≤ 2	≤ 2
Weighing units	kg, lb	kg, g
Readability	1, 2, 5, 10, n	1, 2, 5, 10, n
Piece counting with reference	10, 20, 50, 100, 200	n
Display, digit height	Backlit LCD display, 52 mm	Backlit LCD displays, 13/16,5 mm
Additional functions	Totalising, HOLD function, Integrated KERN Communication Protocol (KCP), ideal for connecting an Merchandise	99 item memories, totalising, printing of date and time, Integrated KERN Communication Protocol (KCP),
	Management or ERP system, Compatible with the KERN EasyTouch App	ideal for connecting an Merchandise Management or ERP system, Compatible with the KERN EasyTouch App
Strain gauge load cells	87 - 1600 Ω	87 - 1600 Ω
Linearisation	3 points	4 points
Input voltage	12 V, 500 mA	12 V, 500 mA
Permissible ambient temperature	-10 °C/40 °C	0 °C/40 °C
Interface RS-232	ves	yes
2. Interface RS-232,		·
separate Y cable	CFS-A04, € 35,-	CFS-A04, € 35,-
Interface RS-485	-	
Interface USB	-	
Interface Bluetooth	KERN KFB-A03, see page 97, € 135,-	
Analogue module	0-10V: KERN KFB-A04, € 100,-; 4-20 mA: KERN KFB-A05, € 100,-; see page 97	-
Signal lamp	CFS-A03, € 280,-	CFS-A03, € 280,-
Foot switch	-	-
Stand	BFS-A07, see page 97, € 140,-	BFS-A07, see page 78, € 140,-
Benchtop stand for display device/wall mount	yes/yes	yes/yes
Protective working cover	KFB-A02S05, see page 97, € 40,-	KFB-A02S05, see page 78, € 40,-
Rechargeable battery pack	KFB-A01, see page 97, € 35,-	KFB-A01, see page 78, € 35,-
Operating/charging time	up to 35 h/12 h	up to 40 h/12 h
Dimensions Housing W×D×H	250×160×65 mm	260×150×65 mm
Net weight	1,2 kg	1,5 kg
Price excl. of VAT, ex works €	220,-	235,-

# Display devices KERN KIB-TM



# **I KERN KIB-TM**

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Practical Flip/Flop display device for greatest ease of use

- Practical Flip/Flop display device: flexible positioning e.g. free-standing or screwed to the wall (optional). By rotating the upper housing shell you can determine the angle of the display as well as the cable outlet. Factory Option ex works for an additional cost, delivery time + 2 working days, KERN KIB-M01, € 95,-
- Industry 4.0: A large number of (optional) data interfaces enable convenient transferring weighing data to tablets, labtops, PCs, networks, smartphones, printers, etc.
- Searching and remote control of the balance using external control devices or computers with the KERN Communication Protocol (KCP). KCP is a standardised interface command structure for KERN balances and other instruments which allows you to recall and manage all relevant parameters and device functions. You can therefore simply connect KERN devices with KCP to computers, industrial control systems and other digital systems. In a large number of cases the KCP is compatible with the MT-SICS protocol. Only possible through RS-232 data interface, other interfaces on request.

In the KERN product range you will find a large number of platforms, weighbridges etc. which you can combine with the KERN KIB-TM display device. Simply select the components, KERN will take care of the rest.

\* Note: In addition to the RS-232 data interface, which is integrated as standard, only one other data interface can be installed and operated



Features	Model KERN
	3 KIB-TM
Display (segments)	6 digits
EC type approval	yes
Resolution verifiable	6000 e
Resolution non verifiable	60000 d
Weighing capacities	≤ 2
Weighing units	kg, g
Readability	1, 2, 5, 10, n
Piece counting with reference	5, 10, 20, 25, 50, 100
Display, digit height	Backlit LCD display, 24 mm
Additional functions	Totalising, HOLD function, printing of time. KCP Only possible through RS-232 USB, Bluetooth, WiFi, Digital I/O, LAN on request
Strain gauge load cells	87-1100 Ω
Linearisation	3 points
Input voltage	12 V DC, 1000 mA
Permissible ambient temperature	-10 °C/40 °C
Interface RS-232	yes*
Interface RS-485	-
Interface USB	KIB-A03*, see page 102, € 120,-
Interface Bluetooth	KIB-A04*, see page 102, € 110,-
WiFi	KIB-A10*, see page 102, € 120,-
SWITCH (DIGITAL I/O)	-
LAN	KIB-A02*, see page 102, € 150,-**
Alibi memory	KIB-A01, € 150,-
Stand	EOC-A05, see page 102, € 60,-
Benchtop stand for display device/wall mount	EOC-A04, € 30,-
Protective working cover	EOC-A01S05, € 40,-
Rechargeable battery pack	KFB-A01, see page 102, € 35,-
Operating/charging time	up to 43 h/3 h
Dimensions Housing W×D×H	268×115×70 mm
Net weight	0,8 kg
Price excl. of VAT, ex works €	190,-



to see what options are offered by this display device, please see the KERN platform scale IOC on page 95/96

# Display devices KERN KFN-TM · KXS-TM



# KERN KFN-TM

Stainless steel display device with IP65 protection and superior display size and optional analogue output for controlling systems (PLC) etc.

# Tip

to see what options are offered by this display device, please see the KERN SFB platform scale on page 63



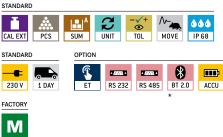


# KERN KXS-TM

Stainless steel display device with IP68 protection and integrated power supply

Tip

to see what options are offered by this display device, please see the KERN SXS platform scale on page 64/65



- not possible in combination with verification.
   When installing the Bluetooth data interface, the RS-232 data interface can no longer be used
- \*\* not possible in combination with signal lamp. When installing the analogue module, the RS-232 data interface can no longer be used

Features	Model KERN	Model KERN
	4 KFN-TM	5 KXS-TM
Display (segments)	5 + 1/2 digits	6 digits
EC type approval	yes	yes
Resolution verifiable	6000 e	10000 e
Resolution non verifiable	30000 d	30000 d
Weighing capacities	≤ 2	≤ 2
Weighing units	kg	kg, g
Readability	1, 2, 5, 10, n	1, 2, 5, 10, 50
Piece counting with reference	10, 20, 50, 100, 200	10, 20, 50, 100, 200
Display, digit height	Backlit LCD display, 52 mm	Backlit LCD display, 55 mm
Additional functions	Totalising, HOLD function	PRE-Tare function, totalising, HOLD function, peak hold, zero-point memorisation
Strain gauge load cells	87 - 1600 Ω	87 - 1600 Ω
Linearisation	3 points	2–7 points
Input voltage	12 V, 500 mA	220–240 V AC
Permissible ambient temperature	-10 °C/40 °C	-10 °C/40 °C
Interface RS-232	KFN-A01, see page 62, € 95,-	KXS-A04, € 100,-
Interface RS-485	-	KXS-A01, € 145,-
Interface USB	-	-
Interface Bluetooth	-	KXS-A02, € 170,- (balance ► PC)
Analogue module	0-10V: KERN KFB-A04, € 100,-; 4-20 mA: KERN KFB-A05, € 100,-; see page 97	-
Foot switch	-	KXS-A03, € 130,-
Stand	BFS-A07, see page 62, € 140,-	YKP-02, € 200,-
Benchtop stand for display device/wall mount	yes/yes	yes/yes
Protective working cover	-	KERN KXS-A07S05, € 40,-
Rechargeable battery pack	GAB-A04, € 40,-	GAB-A04, € 40,-
Operating/charging time	up to 35 h/12 h	up to 80 h/12 h
Dimensions Housing W×D×H	266×165×96 mm	232×170×80 mm
Net weight	2,6 kg	2,5 kg
Price excl. of VAT, ex works €	330,-	360,-

# Platforms KERN KFP · KXP



# KERN KFP-V20 IP65

Platform

13



- Stainless steel-weighing plate,
   A Painted steel base
- 1 load cell, aluminium, silicone-coated, IP65, OIML-R60-approved, class III, 3000 e
- Level indicator and levelling feet for precise levelling of the scale



# KERN KXP-V20 IP65

# Platform



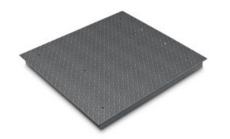
- Stainless steel-weighing plate, 
  Painted steel base, extremely rigid, wing design
- 1 load cell, aluminium, silicone-coated, IP65, OIML-R60-approved, class III, 3000 e
- Level indicator and levelling feet for precise levelling of the scale

Other platform sizes, special construction, individual scale construction according to your individual requirements, also possible with third-party components, please enquire





Model	Weighing	Readability	Verification	Min.	Cable length	Net weight	Weighing	Price
	range		value	load	approx.	approx.	plate	excl. VAT,
	[Max]	[d]	[e]	[Min]			W×D×H	ex works
KERN	kg	g	g	g	m	kg	mm	€
Platform KFP-V2	0 IP65							
KFP 3V20M	3	0,1	1	20	2,5	3,6	230×230×110	170,-
KFP 6V20M	6	0,2	1   2	40	2	3,6	230×230×110	170,-
KFP 6V20LM	6	0,2	1   2	40	2,5	6	300×240×110	220,-
KFP 15V20M	15	0,5	2   5	100	2	6	300×240×110	220,-
KFP 15V20LM	15	0,5	2   5	100	2,5	10	400×300×125	270,-
KFP 30V20SM	30	1	10	200	2,5	6	300×240×110	215,-
KFP 30V20M	30	1	5   10	200	2	10	400×300×125	275,-
KFP 60V20M	60	2	10   20	400	2	10	400×300×125	280,-
KFP 60V20LM	60	2	10   20	400	2	10	500×400×137	360,-
KFP 150V20M	150	5	20   50	1000	2	10	500×400×137	360,-
KFP 150V20LM	150	5	20   50	1000	2	22	650×500×135	570,-
KFP 300V20M	300	10	50   100	2000	2	22	650×500×135	530,-
KFP 600V20AM	600	20	200	4000	2,5	46	800×600×150	1760,-
Platform KXP-V2	20 IP65							
KXP 6V20LM	6	0,2	1   2	40	3	3,2	300×240×90	290,-
KXP 15V20M	15	0,5	2   5	100	3	3,2	300×240×90	300,-
KXP 15V20LM	15	5	5	100	3	8	400×300×90	390,-
KXP 30V20M	30	1	5   10	200	3	8	400×300×90	390,-
KXP 30V20LM	30	1	5   10	200	3	18	500×400×123	530,-
KXP 60V20M	60	2	10   20	400	3	11	400×300×90	400,-
KXP 60V20LM	60	2	10   20	400	3	22	500×400×123	550,-
KXP 150V20M	150	5	20   50	1000	3	18	500×400×123	530,-
KXP 150V20LM	150	5	20   50	1000	3	34	650×500×133,5	650,-
KXP 300V20M	300	10	50   100	2000	3	34	650×500×133,5	650,-

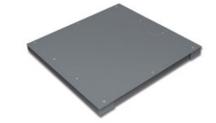


# KERN KIP-V20M

# Weighing bridge



- Weighing bridge with non-slip chequer plate, lacquered, welded
- 4 Load cells, steel, silicone-coated, IP67, OIML-R60-approval for verification, class III, 3000 e
- · Can be built in using pit frames (optional)
- Level indicator and levelling feet for precise levelling of the scale
- Easy access to the junction box from the top
- Comfortable levelling of the weighing bridge from the top
- Accessories see KERN BID, page 105/106

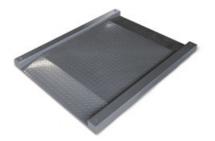


# KERN KFP-V20 IP67

# Weighing bridge



- I Weighing plate screwed on from the top (models with [Max] ≤ 1500 kg), so it easy to remove, hygienic and easy to clean.
- Lacquered steel weighing bridge, weighing plate size 1500×1500×130 mm corrugated steel plate. Extremely resistant to bending due to material thickness
- 4 Load cells, steel, silicone-coated, IP67, OIML-R60-approval for verification, class III, 3000 e
- · Can be built in using pit frames (optional)
- Level indicator and levelling feet for precise levelling of the scale
- Easy access to the junction box from the top
- Comfortable levelling of the weighing bridge from the top
- Accessories see KERN BFB, page 107/108



# KERN KFD-V20

# Weighing bridge



- Weighing bridge made of non-slip corrugated steel plate, lacquered, two access ramps integrated, extremely resistant to bending
- Extremely flat construction to facilitate access: access height only 45 mm
- 4 Load cells, alloy steel, silicone-coated, IP67, OIML-R60-approved class III, 3000 e
- Accessories see KERN NFB page 116

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Model	Weighing	Readability	Verification value	Min. Ioad	Cable length	Net weight	Weighing plate	Price excl. VAT,
	range [Max]	[d]	[e]	[Min]	approx.	approx.	W×D×H	ex works
KERN	kg	g	g	g	m	kg	mm	€
	-	δ	δ	δ		118		
Weighing bridge					r	1		
KIP 600V20SM	600	200	200	4000	5	130	1000×1000×108	980,-
KIP 600V20M	600	200	200	4000	5	150	1500×1200×108	1310,-
KIP 1500V20SM	1500	500	500	10000	5	130	1000×1000×108	1140,- 😃
KIP 1500V20EM	1500	500	500	10000	5	140	1200×1000×108	1070,-
KIP 1500V20M	1500	500	500	10000	5	150	1500×1200×108	1310,- 🔮
KIP 3000V20M	3000	1000	1000	20000	5	150	1500×1200×108	1310,-
KIP 3000V20LM	3000	1000	1000	20000	5	180	1500×1500×108	1560,-
4 Weighing bridge	KFP-V20 IP67							
KFP 600V20SNM	600	200	200	4000	5	105	1000×1000×80	1220,-
KFP 600V20NM	600	200	200	4000	5	135	1500×1250×80	1760,-
KFP 1500V20SNM	1500	500	500	10000	5	105	1000×1000×80	1260,-
KFP 1500V20NM	1500	500	500	10000	5	135	1500×1250×90	1730,-
KFP 3000V20NM	3000	1000	1000	20000	5	135	1500×1250×90	1760,-
KFP 3000V20LNM	3000	1000	1000	20000	5	155	1500×1500×80	1960,-
KFP 6000V20M	6000	2000	2000	40000	5	210	1500x1500x130	2320,-
5 Weighing bridge	KFD-V20							
KFD 600V20M	600	200	200	4000	5	125	1600×1200×78	1700,-
KFD 600V20LM	600	200	200	4000	5	155	1800×1400×80	2000,-
KFD 1500V20M	1500	500	500	10000	5	125	1600×1200×78	1700,-
KFD 1500V20LM	1500	500	500	10000	5	175	1800×1400×78	2000,-

Price reduction

Weighing beams/U-Weighing bridges/Stainless Steel Platforms KERN KFA · KFU · KFP



# KERN KFA-V20

# Weighing beams



- Weighing beams and painted steel base
- 4 load cells, alloy steel, silicone-coated, IP67
- Levelling feet for precise levelling of the weighing beams
- Image below: Version up to 6 t available.
   Each weighing beam has a roller and handle for easy transport of the scale (KERN KFA-L)
- NEW: new model with short weighing beams, ideal for weighing compact items or animals in transport boxes
   KERN KFA-600V20S
- Accessories see KERN UFA, page 110

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# KERN KFU-V20/V30

# U-Weighing bridge



- Load range: painted steel (V20), stainless steel (V30) height 90 mm
- 4 load cells, alloy steel, silicone-coated, IP67, OIML-R60-approval for verification, class III, 3000 e
- 2 rollers and handle for easy transport of the scale
- Accessories KFU-V20 see KERN UFB, page 113
- Accessories KFU-V30 see KERN UFN, page 114



# KERN KFP-V30

# Platform



- Stainless steel-weighing plate,
   I Stainless steel substruction
- 1 load cell, Stainless steel, silicone-coated, IP67, OIML-approved, class III, 3000 e
- Level indicator and levelling feet for precise levelling of the scale





Model	Weighing	Readability	Verification	Min.	Cable length	Net weight	Weighing	Price
	range		value	load	approx.	approx.	plate	excl. VAT,
	[Max]	[d]	[e]	[Min]			W×D×H	ex works
KERN	kg	g	g	g	m	kg	mm	€
<b>6</b> Weighing beams	KFA-V20							
KFA 600V20S	600	200	-	-	5	30	800×120×100	850,-
KFA 1500V20	1500	500	-	-	5	36	1200×120×100	930,-
KFA 3000V20	3000	1000	-	-	5	36	1200×120×100	960,-
KFA 3000V20L	3000	1000	-	-	5	65	2000×120×100	1200,-
KFA 6000V20	6000	2000	-	-	5	85	1200×160×80	1290,-
KFA 6000V20L	6000	2000	-	-	5	125	2100×160×85	1690,-
U-Weighing bridg	e KFU-V20							
KFU 600V20M	600	200	200	4000	5	55	840×1350×90	1130,-
KFU 1500V20M	1500	500	500	10000	5	55	840×1350×90	950,-
Stainless steel U	I-Weighing bridge	KFU-V30						
KFU 600V30M*	600	200	200	4000	5	55	840×1350×90	1600,-
KFU 1500V30M*	1500	500	500	10000	5	55	840×1350×90	1600,-
8 Stainless steel p	latform KFP-V30							
KFP 15V30M	15	0,5	5	100	2,5	5,0	300×240×100	560,-
KFP 30V30SM	30	10	10	200	2,5	5,0	300×240×100	550,-
KFP 30V30M	30	1	10	200	2,5	10	400×300×128	620,-
KFP 60V30M	60	2	20	400	2,5	10	400×300×128	630,-
KFP 60V30LM	60	2	20	400	2,5	10	500×400×137	770,-
KFP 60V30XLM	60	2	20	400	2,5	22	650×500×142	1090,-
KFP 150V30SM	150	5	50	1000	2,5	10	400×300×128	620,-
KFP 150V30M	150	5	50	1000	2,5	10	500×400×137	770,-
KFP 150V30LM	150	5	50	1000	2,5	22	650×500×135	1100,-
KFP 300V30M	300	10	100	2000	2,5	22	650×500×135	1050,-

\* ONLY WHILE STOCKS LAST!

# Stainles steel weighing bridges KERN KFP · KFD



# KERN KFP-V40

# Weighing bridge



- Weighing bridge entirely made of stainless steel, extremely resistant to bending because of its high material thickness
- • Weighing plate fixed with stainless steel screws, for easier access to the loadcells from above
- 4 load cells, stainless steel, encapsulated, IP68, OIML-R60-approved, class III, 3000 e
- Can be built in using pit frames (optional)
  Level indicator and levelling feet for
- precise levelling of the scale
- Comfortable levelling of the weighing bridge from the top
- Accessories see KERN BFN, page 109



# **III KERN KFD-V40**

# Weighing bridge



- Weighing bridge made from stainless steel, two integrated access ramps, extremely resistant to bending
- Extremely flat construction to facilitate access: access height only 45 mm
- 4 load cells, stainless steel, encapsulated IP68, OIML-R60-approval for verification, class III, 3000 e
- Level indicator and levelling feet for precise levelling of the scale
- Accessories see KERN NFN, page 117



Model	Weighing range [Max] kg	Readability [d] g	Verification value [e] g	Min. Ioad [Min] g	Cable length approx. m	Net weight approx. kg	Weighing plate W×D×H mm	Price excl. VAT, ex works €
	Stainless steel weighing bridge KFP-V40							
KFP 600V40SM	600	200	200	4000	5	95	1000×1000×80	2680,-
KFP 1500V40M	1500	500	500	10000	5	135	1500×1250×80	3460,-
KFP 1500V40SM	1500	500	500	10000	5	95	1000×1000×80	2700,-
KFP 3000V40M	3000	1000	1000	20000	5	135	1500×1250×80	3800,-
10 Stainless steel w	Stainless steel weighing bridge KFD-V40							
KFD 600V40M	600	200	200	4000	5	130	1600×1200×78	2700,-
KFD 1500V40M	1500	500	500	10000	5	130	1600×1200×78	2700,-

# **Measuring cells**

Accuracy classes with nominal loads from 300 g to 100 t and protection classes up to IP69K as well as cells protected according to ATEX or OIML approved cells are available to you from now in the SAUTER product range. Whatever the project - whether it's the development of customised weighing systems, installation in silos and storage tanks or in shelving for continuous inventory, for special application in mechanical engineering or in any type of test bench – SAUTER can offer you just the right measuring cell.

Of course, we can also supply you with the appropriate accessories such as load corners, pivot heads, display devices, junction boxes or the relevant calibration certificate at the same time.

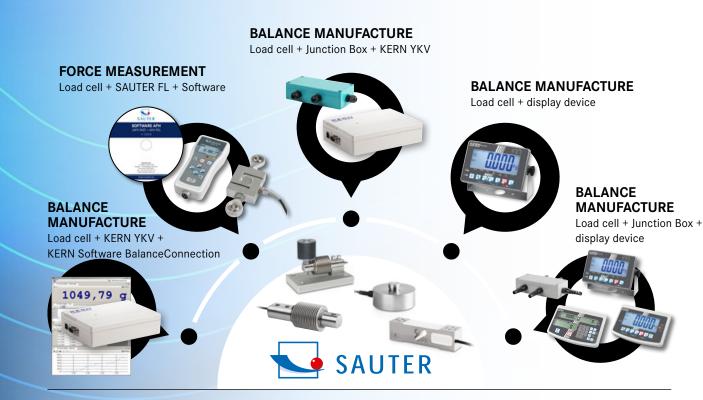
Any special requests? Do you need special load cells, other capacities or cable lengths, individual force test benches or a special mount for your test item? No problem, our product specialist for force-measuring cells Mr Stefan Herrmann is available at any time to help you further and will work with you to develop a customised concept for your application.

13.



Stefan Herrmann Product specialist Load cells

Tel. +49 7433 9933-214 stefan.herrmann@kern-sohn.com



# **SAUTER measuring cells – integration opportunities**





# CP P4 · CP Y4

Single-point load cells made of anodised aluminium



- CP P4: Accuracy in accordance with OIML R60 C3
- CP Y4: Accuracy in accordance with OIML R60 C2
- CE and RoHS compliant
- Dust and spray protection to IP65 (in accordance with EN 60529)
- Aluminium, anodised
- Suitable for price-computing scales, bench scales, platform scales, etc.
- Maximum platform size 200×200 mm
- 4-wire connection
- Nominal sensitivity: 0,9 mV/V

# CP P1 · CP Y1

Single-point load cells made of anodised aluminium



- CP P1: Accuracy in accordance with OIML R60 C3
- CP Y1: Accuracy in accordance with OIML R60 C2
- CE and RoHS compliant
- Dust and spray protection to IP65 (in accordance with EN 60529)
- $\boldsymbol{\cdot}$  Aluminium, anodised
- Suitable for price-computing scales, bench scales, platform scales, etc.
- Maximum platform size 250×350 mm
- 4-wire connection
- Nominal sensitivity: 2 mV/V
- Note: Version in accordance with OIML R60 C4 or C5 on request

# CP P3

Single-point load cells made of anodised aluminium



- Accuracy in accordance with OIML R60 C3
- CE and RoHS compliant
- Dust and spray protection to IP65 (in accordance with EN 60529)
- Suitable for price-computing scales, bench scales, platform scales, etc.
- Maximum platform size 350×400 mm
- 4-wire connection
- Nominal sensitivity: 2 mV/V
  Note: Version in accordance with OIML R60 C4 on request

Model	Nominal load	Price
		excl. of VAT
		ex works
SAUTER	kg	€
CP 300-0P4	0,3	60,-
CP 600-0P4	0,6	60,-

Model	Nominal load	Price excl. of VAT ex works
SAUTER	kg	€
ECO design		
CP 300-0Y4	0,3	45,-
CP 1500-0Y4	1,5	45,-
CP 3000-0Y4	3	45,-

Model	Nominal load	Price excl. of VAT ex works
SAUTER	kg	€
CP 3-3P1	3	55,-
CP 5-3P1	5	55,-
CP 6-3P1	6	55,-
CP 8-3P1	8	55,-
CP 10-3P1	10	55,-
CP 15-3P1	15	55,-
CP 20-3P1	20	55,-
CP 30-3P1	30	55,-
CP 35-3P1	35	55,-
CP 40-3P1	40	55,-
CP 50-3P1	50	55,-

•••••••		,	
Model	Nominal load	Price excl. of VAT ex works	
SAUTER	kg	€	
ECO design (without EC type approval)			
CP 3-2Y1	3	30,-	
CP 5-2Y1	5	30,-	
CP 10-2Y1	10	30,-	
CP 15-2Y1	15	30,-	
CP 20-2Y1	20	30,-	
CP 30-2Y1	30	30,-	

Model	Nominal load	Price excl. of VAT ex works
SAUTER	kg	€
CP 30-3P3	30	70,-
CP 40-3P3	40	70,-
CP 50-3P3	50	70,-
CP 75-3P3	75	70,-
CP 100-3P3	100	70,-
New model		

# Load cells SAUTER CP P2 · CP P7 · CP P9









# CP P2

Single-point load cells of aluminium

STANDARD		OPTION		
666		DAkkS	ISO	
IP 65	1 DAY	+3 DAYS	+4 DAYS	

- Accuracy in accordance with OIML R60 C3
- RoHS compliant
- Dust and spray protection to IP65 (in accordance with EN 60529)
- Aluminium, anodised
- Suitable for price-computing scales, bench scales, etc.
- Maximum platform size 100-300 kg: 400×400 mm
- Maximum platform size 400-500 kg: 450×450 mm
- Nominal sensitivity: 2 mV/V
- Note: Version in accordance with OIML R60 C4 or C5 on request

# CP P7

Single-point load cells of stainless steel



- Accuracy in accordance with OIML R60 C3
  RoHS compliant
- Dust and spray protection to IP67 (in accordance with EN 60529)
- Stainless steel
- Application example: Weight as well as compressive force measurements under harsh environmental conditions
- Suitable for bench scales, price-computing scales
- Maximum platform size 400×400 mm
  6-wire connection
- Nominal sensitivity: 2 mV/V
- Note: Version in accordance with OIML R60 C4 on request

# CP P9

Single-point load cells of stainless steel



- Accuracy in accordance with OIML R60 C3
  RoHS compliant
- Dust and spray protection to IP68/IP69K (in accordance with EN 60529 resp. ISO
- 20653), welded to create a hermetic seal
- Stainless steel
- Area of application: Weight measurement as well as compressive force in harsh environments
- $\boldsymbol{\cdot}$  Suitable for platform scales, checkweighers
- Maximum platform size 10–50 kg: 400×400 mm
- Maximum platform size 100-500 kg: 800×800 mm
- 4-wire connection (10-50 kg)
- 6-wire connection (100-500 kg)
- Nominal sensitivity: 2 mV/V
- Note: Version in accordance with OIML R60 C4 or C5 on request

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Model	Nominal load	Price excl. of VAT ex works
SAUTER	kg	€
CP 100-3P2	100	75,-
CP 150-3P2	150	75,-
CP 200-3P2	200	75,-
CP 300-3P2	300	75,-
CP 400-3P2	400	75,-
CP 500-3P2	500	75,-

Model	Nominal load	Price excl. of VAT ex works
SAUTER	kg	€
CP 30-3P7	30	250,-
CP 50-3P7	50	250,-
CP 75-3P7	75	250,-
CP 100-3P7	100	250,-
CP 150-3P7	150	250,-

Model	Nominal load	Price
		excl. of VAT
		ex works
SAUTER	kg	€
CP 10-3P9	10	350,-
CP 20-3P9	20	350,-
CP 50-3P9	50	350,-
CP 100-3P9	100	530,-
CP 200-3P9	200	530,-
CP 300-3P9	300	530,-
CP 400-3P9	400	530,-
CP 500-3P9	500	530,-

# Load cells SAUTER CR Q1 · CR P1







Fig. shows accessories, load corner SAUTER CE Q42901, for further accessories please visit our online shop

# CR Q1

Load cells made of stainless steel



- Accuracy in accordance with OIML R60 C1
- RoHS compliant
- Dust and spray protection to IP68 (in accordance with EN 60529), hermetically encapsulated
- Stainless steel
- Area of application: Weight measurement
   as well as compressive force
- Suitable for vehicle scales, weigh hoppers, vehicle testing equipment, test benches
- Nominal sensitivity: 2 mV/V

# CR P1

Load cells made of stainless steel



- Accuracy in accordance with OIML R60 C3
- RoHS compliant
- Dust and spray protection to IP68 (in accordance with EN 60529), hermetically encapsulated
- Stainless steel
- Area of application: Weight measurement as well as compressive force
- Suitable for truck scales, suspended scales, silo scales and other diverse scales, test benches, etc.
- Nominal sensitivity: 1–2 mV/V

# Accessories CR Q1:

- Load corner, steel, galvanised, suitable for CR Q1 with nominal load ≤ 10 t, SAUTER CE Q42901, € 245,-
- Load corner, steel, galvanised, suitable for CR Q1 with nominal load ≥ 20 t, SAUTER CE Q42902, € 390,-
- Load corner, steel, rustproof, suitable for CR Q1 with nominal load ≤ 10 t, SAUTER CE RQ42901, € 440,-
- Load corner, steel, rustproof, suitable for CR Q1 with nominal load ≥ 20 t, SAUTER CE RQ42902, € 750,-

# Accessories CR P1:

- Load corner for CR 1000-3P1, CR 250-3P1, CR 500-3P1 Steel, incl. pressure piece,
- SAUTER CE P244011, € 550,-• Pressure piece for CR 1000-3P1, CR 250-3P1, CR 500-3P1 steel,
- SAUTER CE P244012, € 105,Load corner for CR 2000-3P1 steel, rustproof, incl. pressure piece, SAUTER CE P244021, € 660,-
- Pressure piece for CR 2000-3P1 steel, rustproof SAUTER CE P244022, € 115,-

Model	Nominal load	Price excl. of VAT ex works €	
CR 2500-1Q1	2,5 t/25 kN	265,-	
CR 5000-1Q1	5 t/50 kN	265,-	
CR 10000-1Q1	10 t/100 kN	265,-	
CR 20000-1Q1	20 t/200 kN	520,-	
CR 30000-1Q1	30 t/300 kN	520,-	
** up to max_25 t/250 kN			

\*\* up to max. 25 t/250 kN

Model SAUTER	Nominal load	Price excl. of VAT ex works €
CR 60-3P1	60 kg/0,6 kN	860,-
CR 130-3P1	130 kg/1,3 kN	900,-
CR 250-3P1	250 kg/2,5 kN	830,-
CR 500-3P1	500 kg/5 kN	790,-
CR 1000-3P1	1000 kg/10 kN	790,-
CR 2000-3P1	2000 kg/20 kN	790,-

\* up to max. 500 kg/5 kN







Fig. shows accessories, base plate SAUTER CE Q30903 and bearings SAUTER CE Q30904, for further accessories please visit our online shop



Fig. shows optional accessory load corner SAUTER CE P4022

# CB Q1 · CB Q2

Bending beam and shear beam measuring cells made from stainless steelç

STANDAR	ANDARD		OPTION		
666	666	<b>.</b>	DAkkS	ISO	
IP 68	IP 69K	1 DAY	+3 DAYS	+4 DAYS	

- Accuracy in accordance with OIML R60 C3
- CE and RoHS compliant
- Dust and spray protection to IP68/IP69K (in accordance with EN 60529), welded to create a hermetic seal
- Stainless steel
- Area of application: Weight measurement as well as compressive force in harsh environments
- Suitable for platform scales, weigh hoppers, floor scales and other weighing devices
- 4-wire connection

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- Nominal sensitivity: 2 mV/V
- Note: Accuracy class OIML R60 C6 or EX version on request

# CB P1

Measuring cells made from stainless steel



- Accuracy in accordance with OIML R60 C3
- CE and RoHS compliant
- Dust and spray protection to IP67 (in accordance with EN 60529), hermetically encapsulated
- Nickel-plated steel
- Area of application: Weight measurement as well as compressive force in harsh environments
- Suitable for platform scales, silo scales, bed scales and other diverse scales

Nominal load

kg

100

250

Price

excl. of VAT

ex works

€

105,-

105,-

4-wire connection

Model

SAUTER

CB 100-3P1

CB 250-3P1

Nominal sensitivity: 3 mV/V

# Accessories CB Q1 $\cdot$ CB Q2:

- Traction device, steel, galvanised, suitable for CB Q1, SAUTER CE Q30901, € 75,-
- Traction device, steel, rustproof, suitable for CB Q2, SAUTER CE Q34905, € 80,-
- ■ Base plate, steel, galvanised, suitable for CB Q1, SAUTER CE Q30903, € 90,-
- Base plate, steel, rustproof, suitable for CB Q1, SAUTER CE RQ30903, € 175,-
- Base plate, steel, rustproof, suitable for CB Q2, SAUTER CE Q34903, € 85,-
- Bearing, steel, rustproof, suitable for CB Q1 (nominal load 5 kg-50 kg), SAUTER CE Q30904, € 110,-
- Bearing, steel, rustproof, suitable for CB Q1 (nominal load 75 kg-300 kg),
   SAUTER CE Q30905, € 110,-
- Bearing, steel, rustproof, suitable for CB 500-3Q1, SAUTER CE Q30906, € **190,-**
- Bearing, steel, rustproof, suitable for CB 750-3Q2, CB 1000-3Q2, CB 1500-3Q2, SAUTER CE Q34906, € 175,-
- Load corner, steel, galvanised, suitable for CB Q1, SAUTER CE Q30907, € 205,-
- Load corner, steel, rustproof, suitable for CB Q1, SAUTER CE RQ30907, € 290,-
- Adjustable foot, steel, rustproof, suitable for SAUTER CE Q34901, € 65,-

# Accessories CB P1:

- Adjustable foot, steel, nickel-plated, load base M12 for CT 500-3P1, CT 1000-3P1 and CT 1500-3P1, SAUTER CE P2012, € 25,-
- ■ Load corner, steel, nickel-plated for CT 500-3P1, CT 1000-3P1 and CT 1500-3P1, SAUTER CE P4022, € 180,-
- Spacer plates for bending beam CB P1 made from steel, SAUTER CE P3012, € 8,-

Model Nominal load Price excl. of VAT ex works SAUTER kg € CB 5-3Q1 210,-5 CB 10-3Q1 10 210,-CB 20-3Q1 20 210,-CB 30-3Q1 30 210,-CB 50-3Q1 50 210,-CB 75-3Q1 75 210,-CB 100-3Q1 100 210,-CB 150-3Q1 150 210,-CB 200-3Q1 210,-200 CB 250-3Q1 250 210,-CB 300-3Q1 300 210.-CB 500-3Q1 500 210, CB 750-3Q2 750 220,-CB 1000-3Q2 1000 220.-CB 1500-3Q2 1500 220.

\* up to max. 500 kg





Fig. shows optional accessory load corner SAUTER CE RQ35903





Fig. shows optional accessory load corner SAUTER CE P4022

# CT Q1

Shear beam made from stainless steel

STANDAR	NDARD		OPTION		
666	666		DAkkS	ISO	
IP 68	IP 69K	1 DAY	+3 DAYS	+4 DAYS	

- Accuracy in accordance with OIML R60 C3
- CE and RoHS compliant
- Dust and spray protection to IP68/IP69K (in accordance with EN 60529), welded to create a hermetic seal
- Stainless steel
- Area of application: Weight measurement as well as compressive force in harsh environments
- Suitable for platform scales, weigh hoppers, flush-mounted floor scales and other weighing devices
- 6-wire connection
- Nominal sensitivity: 2 mV/V
- Note: EX version on request

Model	Nominal load	Price excl. of VAT
SAUTER	kg	ex works €
CT 300-3Q1	300	205,-
CT 500-3Q1	500	205,-
CT 750-3Q1	750	205,-
CT 1000-3Q1	1000	205,-
CT 1500-3Q1	1500	205,-
CT 2000-3Q1	2000	205,-
CT 3000-3Q1	3000	400,-
CT 5000-3Q1	5000	400,-
CT 7500-3Q1	7500	530,-
CT 10000-3Q1	10000	530,-

\* up to max. 500 kg



Measuring cells made from stainless steel



- Accuracy in accordance with OIML R60 C3
- CE and RoHS compliant
- Dust and spray protection to IP67 (in accordance with EN 60529), welded to create a hermetic seal
- Nickel-plated steel
- Area of application: Weight measurement as well as compressive force in harsh environments
- Suitable for platform scales, weigh hoppers, flush-mounted floor scales and other weighing devices
- 4-wire connection
- Nominal sensitivity: 3 mV/V
- Note: EX version, 6-wire connection and accuracy class C4 or C5 on request
- **CT P2:** Delivery with calibrated characteristic value, if several cells are ordered, this means significantly less effort when aligning the corners of a platform

Model	Nominal load	Price excl. of VAT
SAUTER	kg	ex works €
CT 500-3P1	500	90,-
CT 1000-3P1	1000	90,-
CT 1500-3P1	1500	90,-
CT 2500-3P1	2500	110,-
CT 3000-3P1	3000	110,-
CT 5000-3P1	5000	110,-
CT 10000-3P1	10000	160,-
CT 500-3P2	500	95,-
CT 1000-3P2	1000	95,-
CT 3000-3P2	3000	115,-
CT 5000-3P2	5000	115,-
CT 10000-3P2	10000	165,-

\* up to max. 500 kg

Accessories CT Q1:

- Base plate, steel, rustproof, suitable for CT Q1, SAUTER CE RQ35911, € 185,-
- Base plate, steel, rustproof, suitable for CT 3000-3Q1, CT 5000-3Q1, SAUTER CE RQ35912, € 185,-
- Base plate, steel, rustproof, suitable for CT 7500-3Q1, CT 10000-3Q1, SAUTER CE RQ35919, € 790,-
- Bearing, steel, rustproof, suitable for CT Q1, SAUTER CE RQ35909, € 150,-
- Bearing, steel, rustproof, suitable for CT 3000-3Q1, CT 5000-3Q1, SAUTER CE RQ35910, € 295,-
- Bearing, steel, rustproof, suitable for CT 7500-3Q1, CT 10000-3Q1, SAUTER CE RQ35918, € **360,**-
- Load corner, steel, rustproof, suitable for CT Q1, SAUTER CE RQ35902, € 390,-
- Load corner, steel, rustproof, suitable for CT 3000-3Q1, CT 5000-3Q1, SAUTER CE RQ35903, € 570,-

# Accessories CT P1:

- Load corner, steel, rustproof, suitable for CT 10000-3P1, CT 10000-3P2, SAUTER CE P40210, € **470,**-
- Z Load corner, steel, nickel-plated, suitable for CT 500-3P1, CT 1000-3P1, CT 1500-3P1, SAUTER CE P4022, € 180,-
- Load corner, steel, nickel-plated, suitable for CT 2500-3P1, CT 3000-3P1, CT 5000-3P1, SAUTER CE P4025, € 240,-
- Adjustable foot, steel, rustproof, suitable for CT 500-3P1, CT 1000-3P1, CT 1500-3P1, SAUTER CE P2012, € 25,-

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- Adjustable foot, steel, rustproof, suitable for CT 2500-3P1, CT 3000-3P1, CT 5000-3P1, SAUTER CE P2018, € 35,-
- Adjustable foot, steel, rustproof, suitable for CT 10000-3P1, SAUTER CE P2024, € 105, Spacer plate for CT 500-3P1, CT 500-3P2, CT 1000-3P1, CT 1000-3P2 and CT 1500-3P1,
- SAUTER CE P3012, € 8,-• Spacer plate for CT 2500-3P1, CT 3000-3P1, CT 3000-3P2, CT 5000-3P1 and CT 5000-3P2 SAUTER CE P3015, € 8,-
- Spacer plate for CT 10000-3P1 and CT 10000-3P2 SAUTER CE P30110, € 25,-

# Messzellen SAUTER CO Y1 · CO Y2 · CO Y5







# CO Y1

Miniature button-type measuring cells made of stainless steel

STANDAR	D	OPTION	
666		DAkkS	ISO
IP 65	1 DAY	+3 DAYS	+4 DAYS
		**	

- Accuracy in accordance with OIML G5
- High precision (comprehensive Error 0,05 % F.S.)
- RoHS compliant
- Scope of application: compressive force applications
- Suitable for Weight measurement as well as force and force test benches
- Nominal sensitivity: 1.0 1.5 mV/V

# CO Y2

Miniature button-type measuring cells made of stainless steel



- Accuracy in accordance with OIML G5
- High precision (comprehensive Error 0,05 % F.S.)
- RoHS compliant
- Scope of application: for tensile and compressive force measurement
- Suitable for Weight measurement as well as force and force test benches
- Nominal sensitivity: 1,5 2 mV/V, depending on nominal load

# CO Y5

Tension and compression load cells made of stainless steal

STANDAR	D		OPTION	
666	М	<b>.</b>	DAkkS	ISO
IP 66		1 DAY	+3 DAYS	+4 DAYS
			not	
			CO 0.5-Y5	

- · Accuracy in accordance with OIML R60 G1
- · CE and RoHS compliant
- Dust and spray protection to IP66 (in accordance with EN 60529)
- Stainless steel
- Very low profile
- Suitable for test stands, force measuring devices, Automation systems, etc.
- 4-wire connection
- Nominal sensitivity:

CO 0.5-Y5, CO 1-Y5: 1 mV/V CO 5-Y5, CO 10-Y5: 2 mV/V

Model SAUTER	Nominal load	Price excl. of VAT ex works €
CO 10-Y1	10 kg/100 N	155,-
CO 20-Y1	20 kg/200 N	155,-
CO 50-Y1	50 kg/500 N	155,-
CO 100-Y1	100 kg/1 kN	155,-
CO 200-Y1	200 kg/2 kN	155,-
CO 500-Y1	500 kg/5 kN	180,-
CO 1000-Y1	1000 kg/10 kN	180,-
CO 2000-Y1	2000 kg/20 kN	205,-

\*\* up to 500 kg/5 kN

13

Model	Nominal load	Price
		excl. of VAT
		ex works
SAUTER		€
CO 10-Y2	10 kg/100 N	220,-
CO 20-Y2	20 kg/200 N	220,-
CO 50-Y2	50 kg/500 N	220,-
CO 100-Y2	100 kg/1 kN	275,-
CO 200-Y2	200 kg/2 kN	275,-
CO 500-Y2	500 kg/5 kN	275,-
CO 1000-Y2	1000 kg/10 kN	275,-
CO 2000-Y2	2000 kg/20 kN	300,-

Nominal load	Price
	excl. of VAT
	ex works
	€
0,5 kg/5 N	320,-
1 kg/10 N	320,-
5 kg/50 N	320,-
10 kg/100 N	320,-
	0,5 kg/5 N 1 kg/10 N

<sup>\*\*</sup> up to 500 kg/5 kN







#### CJ P

Junctionbox CJ P for connecting several measuring cells to one evaluation unit



• Prepared for 4-wire and 6-wire measuring cells

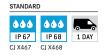
- Models available for 2, 4, 6 or 8 load cells
- · Robust aluminium die-cast housing
- Protection against dust and spray

CJ X467



#### CJ X

Junctionbox for connecting several measuring cells to one evaluation unit



- Prepared for 4-wire and 6-wire measuring cells
- Models available for 4 load cells

#### CJ X467:

 Robust stainless steel housing with protection against dust and water splashes IP67

#### CJ X468:

 Robust aluminium die-cast housing with protection against dust and water splashes IP68

Model	Number of connections	Price excl. of VAT ex works
SAUTER		€
CJ P2	2	80,-
CJ P4	4	80,-
CJ P4PG	4	90,-
CJ P6	6	100,-
CJ P8	8	100,-

Model SAUTER	Number of connections	Price excl. of VAT ex works €
CJ X467	4	190,-
CJ X468	4	110,-

# KERN VHB Page 147

- > The power package in the dispatch department and warehouse
- > The display device is well-protected by a metal frame
- > Due to the optimized loads rollers it is easier to get over rough ground



# **Pallet truck scales**

Weighing and transporting – just one operation

Speed up your warehouse and dispatch processes with the KERN pallet truck scales.

Get the exact weight of a load and at the same time, transport it to a specific location, all in one operation. This reduces commissioning times and avoids queues in front of fixed floor scales.

These mobile weighing solutions are space-saving and deliver reliable weighing results. Differences between given and actual weights can be determined quickly e.g. in the goods-in and out department. This uncovers inaccurate quantities, saves time and money and therefore ensures a very short amortisation period of the scales original cost. KERN pallet truck scales are of robust industrial quality, with high-level protection against dust and water splashes, with high-contrast, easy-to-read displays as well as solid wheels and load rollers – all this helps to give you practical support in your work – day after day.

Of course, all KERN pallet truck scales can also be calibrated and delivered with a DAkkS calibration certificate (optional). This ensures the high level of accuracy of your pallet truck scale.

## **Quick-Finder Pallet truck scales**

Readability [d]	Weighing capacity [Max]	Model	Price excl. of VAT ex works	Page	DAYS		SUM	¢¢¢ IP	BATT	ACCU
kg	kg	KERN	€			For an expl	anation on t	he pictos	, see front flap	
1	2000	VHB 2T1	1510,-	147	2	•	٠	•	•	
									• = standard	<b>o</b> = option

#### Pallet truck scale KERN VHB



Pallet truck scale with complete protection against dust and water splashes IP65/67 and a memory for a container weight

#### Features

- PRE-TARE function for manual subtraction of a known container weight, useful for checking fill-levels
- Display device: plastic, protection against dust and water splashes IP65
- Icoad fork: Protection against dust and water splashes IP67, temporary use in wet areas possible
- Pivot range 206°
- Castors: Solid rubber on aluminium rims
- Icoad rollers: Tandem tyres to overcome thresholds and obstacles more easily
- Totalising of weights
- Ready for use: Batteries included, 4×1.5 V AA, operating time up to 80 h

#### Technical data

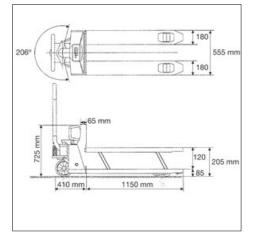
- Large LCD display, digit height 28 mm
- Permissible ambient temperature -10  $^{\circ}\text{C}/\text{40}$   $^{\circ}\text{C}$

#### Accessories

Castors made of red polyurethane on aluminium rims. Ideal for light-coloured flooring as they leave less visible abrasive marks. Suitable for the current models of the pallet truck scale range KERN VHB (when retrofitting, please give the serial number of the pallet truck scale available when ordering), scope of delivery: 1 item, KERN VHB-A02, € 160,-







Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping



Model	Weighing capacity	Readability	Net weight	Price	Option	
				excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]	approx.	ex works	DAkkS	
KERN	kg	kg	kg	€	KERN	€
VHB 2T1	2000	1	110	1510,-	963-131	230,-

# KERN HFD Page 159/160

- > Triple-range scale: Ideal, when high maximum loads need to be weighed, but in the lower load range you still need high resolution. This means that three balances can be replaced with one – which saves space and money!
- > Also available with high protection type IP67 !
- > Also EC type approval as version with calibration approval!

# from € 410,-

# Hanging scales/Crane scales

#### **TÜV-tested safety**

KERN puts great emphasis on safety. For your safety, all KERN hanging and crane scales are subject to a stringent load test in accordance with EN 13155 and (Non-fixed load lifting attachments/breakage resistance) and EN 61010-1 (Electrical safety).

As well as the classic crane scales, we also have electronic tensile dynamometers which are extremely versatile thanks to their stable, compact construction. They can, for example, be fitted into testing machines, used for checking for overload, for bracing and tensile force measurement, etc.

This type of device is ideally suited for use between shackles or with a test bench. This is where the benefit of this construction comes to the fore, as the tensile force can be applied in both directions. These compact crane scales are also particularly suitable when weighing suspended loads where space is tight.

At the core of this construction is a robust load cell. Through the absence of moving parts, these scales are practical in maintenance and wear free.

## Note

DAkkS calibration and conformity evaluation for crane scales up to 12 t



Do you use your crane scales in ISO-certified processes or where verification is mandatory? Then we can produce the right calibration certificate or the relevant Declaration of Conformity for your measuring device. Thanks to a modern crane scale test unit, we can calibrate or verify crane scales and force-measuring devices from any manufacturer to a maximum load of up to 12 t or 120 kN. You can find all the important details on pages 206, 211 or directly from one of our test service specialists, we will be pleased to help you.

## **Quick-Finder Hanging scales/Crane scales**

Readability	Weighing capacity	Model	Price excl. of VAT	Page	DAYS	м	CAL EXT	BT	MOVE	۵۵۵ IP	BATT	ACCU
[d] <g< th=""><th>[Max]</th><th>KERN</th><th>ex works €</th><th></th><th></th><th>Eora</th><th>n ovnlana</th><th>ation on t</th><th>he pictos</th><th>soo fror</th><th>t flan</th><th></th></g<>	[Max]	KERN	ex works €			Eora	n ovnlana	ation on t	he pictos	soo fror	t flan	
-	kg 5	HDB 5K5N	60,-	152	1	101 0	•			, 366 1101		-
0,005	5 6	HDB 6K-3XL	85,-	152	1		•	-	•			
0,005	10	HDB 10K10N	60,-	153	1				•			
0,01	15	HDB 10K-2XL	85,-	153	1		•		•			
0,01	20	HCB 20K10	110,-	154	1		•		•			
0,01	50	HGA 50K-2S05	99,-*	154	1		•					
0,02	15	CH 15K20	<u> </u>	151	1		•		•			
0,02	30	HDB 30K-2XL	85,-	153	1		•		•			
0,02	50	HCB 50K20	120,-	154	1				•			
0,02	60	HCD 60K-2	200,-	154	1		•					•
0,02   0,05	60   150	HCD 100K-2D	210,-	156	1		•					
0,02   0,03	50	CH 50K50	76,-	150	1		•		•			
0,05	99	HCB 99K50		151	1			-	•			
0,05	150	HCD 100K-2	105,-	154	1							
			200,-		1							
0,05   0,1	150   300	HCD 300K-2D	210,-	156								
0,05   0,1   0,2 0,05   0,1   0,2	150   300   600 150   300   600	HFD 600K-1 HFD 600K-1IP	<u>410,-</u> 570,-	159 159	1		•	0		•		
								0				-
0,1	50	CH 50K100	65,-	151	1		•		•			
0,1	50	HCB 50K100	95,-	154	1		•		•			
0,1	50	HCN 50K100IP	135,-	155	1		•		•	•		
0,1	200	HCB 200K100	120,-	154	1		•		•			
0,1	300	HCD 300K-1	200,-	156	1		•				•	
0,1	1000	HFM 1T0.1	830,-	161	1		•					
0,1   0,2   0,5	300   600   1500	HFD 1T-4	420,-	159	1		•	0				•
0,1   0,2   0,5	300   600   1500	HFD 1T-4IP	580,-	159	1		•	0		•		•
0,2	100	HCB 100K200	105,-	154	1		•		•		•	
0,2	100	HCN 100K200IP	135,-	155	1		•		•	•	•	
0,2	600	HFA 600K-1	620,-	157	1		•				•	•
0,2	600	HFC 600K-1	980,-	158	1		•	-				•
0,2	600	HFD 600K-1M	530,-	159	1	0	•	0				•
0,2   0,5   1	600   1500   3000	HFD 3T-3	590,-	159	1		•	0				•
0,2   0,5   1	600   1500   3000	HFD 3T-3IP	790,-	159	1		•	0		•		•
0,5	200	HCB 200K500	100,-	154	1		•		•		•	
0,5	200	HCN 200K500IP	135,-	155	1		•		•	•	•	
0,5	1000	HFA 1T-4	620,-	157	1		•				•	•
0,5	1000	HFC 1T-4	980,-	158	1		٠				•	•
0,5	1500	HFD 1T-4M	540,-	159	1	0	•	0				•
0,5	3000	HFM 3T0.5	860,-	161	1		•					•
0,5	5000	HFM 5T0.5	1150,-	161	1		•					•
0,5   1   2	1500   3000   6000	HFD 6T-3	740,-	159	1		•	0				•
0,5   1   2	1500   3000   6000	HFD 6T-3IP	840,-	159	1		•	0		•		•
1	500	HCB 0.5T-3	195,-	154	1		•		•		•	
1	3000	HFA 3T-3	680,-	157	1		•				•	•
1	3000	HFC 3T-3	1040,-	158	1		٠				•	•
1	3000	HFD 3T-3M	710,-	159	1	0	٠	0				•
1	10000	HFM 10T1	1530,-	161	2**		٠					•
2   5	3000   6000   12000	HFD 10T-3	840,-	159	1		٠	0				•
2   5	3000   6000   12000	HFD 10T-3IP	960,-	159	1		۲	0		٠		•
2	1000	HCB 1T-3	255,-	154	1		٠		•		•	
2	5000	HFA 5T-3	750,-	157	1		٠				•	•
2	5000	HFC 5T-3	1120,-	158	1		۲				•	•
2	6000	HFD 6T-3M	860,-	159	1	0	٠	0				•
5	10000	HFA 10T-3	1180,-	157	1		•				•	•
5	10000	HFC 10T-3	1550,-	158	1		•				•	•
5	12000	HFD 10T-3M	990,-	159	1	0	•	0				

 $^{\star\star}$  Shipment via freight forwarder. Please ask for dimensions, gross weight, shipping costs









Ultra compact, digital luggage scale for fast weighing of luggage and other suspended loads

#### Features

- This ergonomically-optimised luggage scale is perfectly suited for rapid, accurate checking of cases, bags, sports baggage, etc. The high maximum load means that there is sufficient safety reserve and can therefore also be used for weighing other, suspended loads
- Ergonomic design for easy handling
- Robust nylon fabric tape for secure fixing of the item to be weighed
- Simple and convenient 1-key operation
- Easy to toggle between units at the press of a button
- High mobility: thanks to battery operation, compact, lightweight construction, it is suitable for the use in several locations
- Automatic Hold function: When the weighing value remains unchanged the weight indicated on the display is automatically "frozen" for 10 sec. This leaves sufficient time to read the weight in peace

#### Technical data

- · LCD display, digit height 9 mm
- Ready for use: Batteries included, 3V CR2032, operating time up to 20 h, AUTO-OFF function to preserve the battery, Battery level indicator on display
- Note: The models are only delivered in a set of 5 units. i.e. the price given in the table refers to a delivery of 5 items. Cannot be delivered individually. The calibration prices given here refer to calibration of a single balance

-	
	5
	-

STANDARI	D			OPTION
C	<b></b>		<b>.</b>	DAkks
UNIT	BATT	DMS	1 DAY	+3 DAYS

Model	Weighing	Readability	Dimensions	Net weight/	Quantity	Price	Option		Quantity
	capacity		housing	balance	delivered	excl. of VAT	DAkkS Calibr. Certificate		delivered
	[Max]	[d]	W×D×H	approx.	(balances)	ex works	DAkkS		(DAkkS Calibr.
KERN	kg	g	mm	kg		€	KERN	€	Certificate)
HGA 50K-2S05	50	10	150×31×35	0,4	5	99,-*	963-128H	99,-	1

I ONLY WHILE STOCKS LAST!

150 Hanging scales/Crane scales

\* Price set of 5 units

www.kern-sohn.com · Order hotline +49 7433 9933-0



# The classic among manual hanging scales – perfect for rapid weighing of higher loads

#### Features

- With the TÜV certification mark, the scales meet the requirements of the standard EN 13155 (Non-fixed load lifting attachments/ Breakage resistance) and EN 61010-1 (Electrical safety)
- Ideal for rapid control in goods-in and goods-out
- Also essential in the private sector to determine the weight of fish, game, fruits, bicycle parts, suitcases etc.
- Hold function: For easy reading of the weighing result, the display can be "frozen" in different ways. Either automatically when the weighing value remains unchanged or manually by pressing the Hold key
- Peak load display (peak hold)
- Hook, steel

#### Technical data

- LCD display, digit height 11 mm
- Tape measure, extractable, length approx. 100 cm
- Ready for use: Batteries included, 9 V block, operating time up to 20 h
- Further weighing units: kg, lb, N
- Permissible ambient temperature 5  $^{\circ}\text{C}/35$   $^{\circ}\text{C}$

#### Accessories

S)

• **I** Tare pan with pan beam, details see Accessories, KERN CH-A01N, **€ 85,**-

STANDARD	OPTION					
	C	^-	m		<b>P</b>	DAkkS
CAL EXT	UNIT	MOVE	BATT	DMS	1 DAY	+3 DAYS

Model	Weighing capacity	Readability	Dimensions housing	Net weight	Price	Option	
			W×D×H		excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]		approx.	ex works	DAkkS	
KERN	kg	g	mm	kg	€	KERN	€
CH 15K20	15	20	90×30×176,5	0,35	69,-	963-128H	99,-
CH 50K50	50	50	90×30×176,5	0,35	76,-	963-128H	99,-
CH 50K100	50	100	90×30×176,5	0,35	65,-	963-128H	99,-



### Practical hanging scale for rapid, mobile weighing

#### Features

- With the TÜV certification mark, the scales meet the requirements of the standard EN 13155 (Non-fixed load lifting attachments/ breakage resistance) and EN 61010-1 (Electrical safety)
- Ideal for rapid control in goods-in and goods-out
- Also essential in the private sector to determine the weight of fish, game, fruits, bicycle parts, suitcases etc.
- Hold function: For easy reading of the weighing result, the display can be "frozen" in different ways. Either automatically when the weighing value remains unchanged or manually by pressing the Hold key
- Hook, steel, can be hinged
- Peak load display (peak hold)

#### Technical data

- LCD display, digit height 12 mm
- Ready for use: Batteries included, 2×1.5 V AAA, operating time up to 180 h
- Further weighing units: kg, lb, N
- Permissible ambient temperature 5 °C/35 °C

# SUD Production monitored Type tested



#### Accessories

 I are pan with pan beam, details see Accessories, KERN CH-A01N, € 85,-

STANDARD	STANDARD									
	C	^	<b></b>			DAkkS				
CAL EXT	UNIT	MOVE	BATT	DMS	1 DAY	+3 DAYS				

Model	Weighing capacity	Readability	Dimensions housing	Net weight	Price	Option	
			W×D×H		excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]		approx.	ex works	DAkkS	
KERN	kg	g	mm	kg	€	KERN	€
HDB 5K5N	5	5	72×25×105	0,20	60,-	963-127H	82,-
HDB 10K10N	10	10	72×25×105	0,20	60,-	963-128H	99,-

Hanging scale KERN HDB-XL



## User-friendly hanging scale for rapid, mobile weighing

#### Features

- The larger design creates space for a large handle, which enables even better handling especially with heavier loads
- With the TÜV certification mark, the scales meet the requirements of the standard EN 13155 (Non-fixed load lifting attachments/ Breakage resistance) and EN 61010-1 (Electrical safety)
- Ideal for rapid control in goods-in and goods-out
- Also essential in the private sector to determine the weight of fish, game, fruits, bicycle parts, suitcases etc.
- Hold function: For easy reading of the weighing result, the display can be "frozen" in different ways. Either automatically when the weighing value remains unchanged or manually by pressing the Hold key
- Peak load display (peak hold)
- Hook, steel, can be hinged

#### **Technical data**

- · LCD display, digit height 12 mm
- Ready for use: Batteries included,  $2{\times}1.5$  V AAA, operating time up to 180 h
- Further weighing units: kg, lb,  $\mathsf{N}$
- Permissible ambient temperature 5  $^\circ\text{C}/35$   $^\circ\text{C}$

#### Accessories

Ś

 I are pan with pan beam, details see Accessories, KERN CH-A01N, € 85,-

STANDARD						OPTION
	C	^-				DAkkS
CAL EXT	UNIT	MOVE	BATT	DMS	1 DAY	+3 DAYS

Model	Weighing capacity	Readability	Dimensions housing	Net weight	Price	Option	
			W×D×H		excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]		approx.	ex works	DAkkS	
KERN	kg	g	mm	kg	€	KERN	€
HDB 6K-3XL	6	5	107×25×101	0,20	85,-	963-128H	99,-
HDB 10K-2XL	15	10	107×25×101	0,20	85,-	963-128H	99,-
HDB 30K-2XL	30	20	107×25×101	0,20	85,-	963-128H	99,-





#### Handy hanging scale for higher loads

#### Features

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- 🛽 With the TÜV certification mark, the scales meet the requirements of the standard EN 13155 (Non-fixed load lifting attachments/ breakage resistance) and EN 61010-1 (Electrical safety)
- · Ideal for rapid control in goods-in and goods-out
- · Also essential in the private sector to
- determine the weight of fish, game, fruits, bicycle parts, suitcases etc. · Hold function: For easy reading of the
- weighing result, the display can be "frozen" in different ways. Either automatically when the weighing value remains unchanged or manually by pressing the Hold key
- Peak load display (peak hold), Measuring frequency 5 Hz
- [Max] ≤ 200 kg: Snap link (stainless steel) with safety catch, as standard
- [Max] ≤ 200 kg: Hook (stainless steel) as standard

STANDARD						OPTION
	C	^	<b></b>			DAkks
CAL EXT	UNIT	MOVE	BATT	DMS	1 DAY	+3 DAYS

#### • $\square$ [Max] $\ge$ 0,5 t: Reinforced version for heavy loads. Snap link and Hook not included

#### **Technical data**

- · LCD display, digit height 12 mm
- · Hole diameter of load support, model with  $[Max] \le 200 \text{ kg: approx. 14 mm}$ [Max] > 200 kg: approx. 16 mm
- Ready for use: Batteries included, 3×1.5 V AA, operating time up to 300 h

#### Accessories

#### for models with [Max] ≤ 20 kg

• Tare pan with pan beam, details see Accessories, KERN CH-A01N, € 85,-

#### for models with [Max] ≥ 100 kg

• I Hook with safety catch, cast steel, galvanised and lacquered, revolving. Scope of delivery: 2 shackles, 1 lacquered screw bolt, 1 hook, KERN YHA-06, € 125,-

#### for models with [Max] ≤ 200 kg

- Snap link (stainless steel) with safety catch, standard, opening approx. 15 mm, KERN HCB-A01, € 35,-
- Hook (stainless steel), standard, opening approx. 25 mm, KERN HCB-A02, € 30,-

#### for models with $[Max] \ge 0.5 t$

• 4 High-strength shackle, hot-dipped galvanised cast steel bracket, bow shaped. Scope of delivery: 2 shackles with lacquered screw bolts, suitable for models KERN HCB with [Max] ≥ 0,5 t, KERN YSC-04, € 60,-

Model	Weighing capacity	Readability	Dimensions housing	Net weight	Price	Option	
			W×D×H		excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]		approx.	ex works	DAkkS	
KERN	kg	g	mm	kg	€	KERN	€
HCB 20K10	20	10	82×43×153	0,30	110,-	963-128H	99,-
HCB 50K20	50	20	82×43×153	0,30	120,-	963-128H	99,-
HCB 50K100	50	100	82×43×153	0,30	95,-	963-128H	99,-
HCB 99K50	99	50	82×43×153	0,30	105,-	963-129H	116,-
HCB 100K200	100	200	82×43×153	0,30	105,-	963-129H	116,-
HCB 200K100	200	100	82×43×153	0,30	120,-	963-129H	116,-
HCB 200K500	200	500	82×43×153	0,30	100,-	963-129H	116,-
HCB 0.5T-3	500	1000	82×43×153	0,40	195,-	963-130H	210,-
HCB 1T-3	1000	2000	82×43×153	0,40	255,-	963-130H	210,-

















# Robust, compact hanging scale with high level of protection against dust and water spray

#### Features

- With the TÜV certification mark, the scales meet the requirements of the standard EN 13155 (Non-fixed load lifting attachments/ Breakage resistance) and EN 61010-1 (Electrical safety)
- Housing stainless Steel, IP65-protected against dust and water splashes
- Ideal for rapid control in goods-in and goods-out
- Also essential in the private sector to determine the weight of fish, game, fruits, bicycle parts, suitcases etc.
- Hold function: For easy reading of the weighing result, the display can be "frozen" in different ways. Either automatically when the weighing value remains unchanged or manually by pressing the Hold key
- Peak load display (peak hold), measuring frequency 5 Hz
- Snap link (stainless steel) with safety catch, as standard
- Hook (stainless steel) as standard

#### **Technical data**

- LCD display, digit height 12 mm
- Hole diameter of load support, model with [Max] ≤ 200 kg: approx. 14 mm
   [Max] > 200 kg: approx. 16 mm
- 2 Second display on the rear of the balance
- Ready for use: Batteries included, 2×1.5 V AA, operating time up to 200 h

#### Accessories

#### for models with [Max] $\ge$ 100 kg

- In Hook with safety catch, cast steel, galvanised and lacquered, revolving. Scope of delivery: 2 shackles, 1 lacquered screw bolt, 1 hook, KERN YHA-06, € 125,-
- Snap link (stainless steel) with safety catch, standard, opening approx. 15 mm, KERN HCB-A01, € 35,-
- Hook (stainless steel), opening approx.
   25 mm, KERN HCB-A02, € 30,-

STANDARD							OPTION
7	C	^	666				DAkkS
CAL EXT	UNIT	MOVE	IP 65	BATT	DMS	1 DAY	+3 DAYS

Model	Weighing capacity	Readability	Dimensions housing	Net weight	Price	Option	
			W×D×H		excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]		approx.	ex works	DAkkS	
KERN	kg	g	mm	kg	€	KERN	€
HCN 50K100IP	50	100	96×48×179	0,50	135,-	963-128H	99,-
HCN 100K200IP	100	200	96×48×179	0,50	135,-	963-129H	116,-
HCN 200K500IP	200	500	96×48×179	0,50	135,-	963-129H	116,-

#### Crane scale KERN HCD



## High-resolution crane scale for loads up to 300 kg

#### Features

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- Fully-equipped crane scale for low to medium load ranges. The solid design guarantees that extra level of safety (TÜV tested).
   Thanks to the large LCD display and the remote control which is delivered as standard, it can also be operated safely from a distance and results can be read off
- With the TÜV certification mark, the scale meets the requirements of the standard EN 13155 (Non-fixed load lifting attachments/ Breakage resistance) and EN 61010-1 (Electrical safety)
- High level of mobility: thanks to battery pack operation, compact construction and low weight, it is suitable for use in several locations (production, warehouse, dispatch department, etc.)
- Hold function: For easy reading of the weighing result, the display can be "frozen" in different ways. Either automatically when the weighing value remains unchanged or manually by pressing the Hold key

STANDARD	)				OPTION	
T	C				<b></b> ,	DAkkS
CAL EXT	UNIT	BATT	DMS	1 DAY	ACCU	+3 DAYS

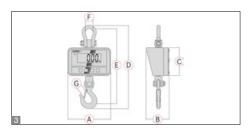
- Tare: Resets the display to "0" when there is a load on the scale. Now removed or added loads are directly displayed
- Battery level indicator, LED visual display
- Large high-contrast display that is easy to read
- Standby function: display automatically switched off after 5 min without a change of load. Automatic activation with the touch of a key
- · Hook with safety catch, revolving
- Shackle and safety catch made of nickel-plated steel
- Infrared remote control standard. Range up to 20 m. All functions can be selected.
   W×D×H 65×24×100 mm. Batteries included











#### **Technical data**

- Backlit LCD display digit height 28 mm
- Ready for use: Batteries included, 4×1.5 V AA, operating time up to 100 h
- Precision: 0,2 % of [Max]
- Permissible ambient temperature 5 °C/40 °C

#### Accessories

 Internal rechargeable battery pack for Load lifting attachments, operating time up to 50 h without backlight, charging time approx. 12 h, KERN HCD-A01, € 50,-

Model	Weighing	Readability	Net weight							Price	Option		
	capacity										DAkkS Calibr. Ce	ertificate	
	[Max]	[d]	approx.	А	В	С	D	E	F	G	ex works	DAkkS	
KERN	kg	g	kg	mm	mm	mm	mm	mm	mm	mm	€	KERN	€
HCD 60K-2	60	20	1,10	150	79	97	276	250	26	18	200,-	963-129H	116,-
HCD 100K-2	150	50	1,10	150	79	97	276	250	26	18	200,-	963-129H	116,-
HCD 300K-1	300	100	1,10	150	79	97	276	250	26	18	200,-	963-129H	116,-
	Du	al-range bala	nce switches	s automat	ically to th	ne next lar	gest weig	hing capa	city [Max]	and read	ibility [d]		
HCD 100K-2D	60   150	20   50	1,10	150	79	97	276	250	26	18	210,-	963-129H	116,-
HCD 300K-2D	150   300	50   100	1,10	150	79	97	276	250	26	18	210,-	963-129H	116,-



#### Compact crane scale with integrated display can also be used for tensile force measurement

#### Features

- With the TÜV certification mark, the scale meets the requirements of the standard EN 13155 (Non-fixed load lifting attachments/ Breakage resistance) and EN 61010-1 (Electrical safety)
- With its high-quality finish, low weight and compact dimensions, this crane scale (tensile force gauge) is an essential device for industrial use, on building sites, in freight centres, ports etc.
- Because of its compact design it is also ideally suited for installation in systems where space is limited, etc.
- Ideally suited for determining weight quickly while loading and unloading
- Peak load display (peak hold)
- Hold function: For easy reading of the weighing result, the display can be "frozen" in different ways. Either automatically when the weighing value remains unchanged or manually by pressing the Hold key
- Tare: Resets the display to "0" when there is a load on the scale. Now removed or added loads are directly displayed
   STANDARD
   OPTION

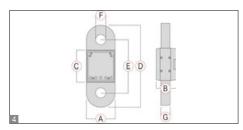
T	$\mathcal{C}$						DAkkS					
CAL EXT	UNIT	BATT	ACCU	MULTI	DMS	1 DAY	+3 DAYS					

#### **Technical data**

- Large backlit LCD display, digit height 23 mm
- Material and design of housing/load support, models with [Max] ≤ 3 t: aluminium/stainless steel bearing
- [Max] > 3 t: steel/steel
- Internal rechargeable battery pack, operating time up to 30 h without backlight, charging time approx. 12 h
- Optional battery operation, 3×1.5 V AA not included in scope of delivery, operating time up to 40 h
- Precision: 0,2 % of [Max]
- Measuring frequency 60 Hz
- Further weighing units: kg, lb, N
- Permissible ambient temperature 5 °C/35 °C







#### Accessories

- Image: Provide the strength shackle, hot-dipped galvanised cast steel bracket, bow shaped. Scope of delivery: 2 shackles with lacquered screw bolts, suitable for models with
   [Max] ≤ 5 t: KERN YSC-01, € 100,-
- [Max] > 5 t: KERN YSC-02, € 210,-
- B Hook with safety catch, cast steel, galvanised and lacquered, non-revolving. Scope of delivery: 2 shackles, 1 lacquered screw bolt, 1 hook, suitable for models with
- [Max] ≤ 1 t: KERN YHA-01, € 170,-
- [Max] = 3 t: KERN YHA-02, € 190,-
- [Max] = 5 t: KERN YHA-03, € 230,-
- [Max] > 5 t: KERN YHA-04, € 410,-

Model	Weighing capacity	Readability	Net weight	Dimensions				Price excl. of VAT	Option DAkkS Calibr. Ce	ertificate			
	[Max]	[d]	approx.	Α	В	С	D	E	F	G	ex works	DAkkS	
KERN	kg	g	kg	mm	mm	mm	mm	mm	mm	mm	€	KERN	€
HFA 600K-1	600	200	1,8	90	62	100	255	165	32	30	620,-	963-130H	210,-
HFA 1T-4	1000	500	1,8	90	62	100	255	165	32	30	620,-	963-130H	210,-
HFA 3T-3	3000	1000	2,0	90	62	100	255	165	32	30	680,-	963-132H	520,-
HFA 5T-3	5000	2000	4,0	90	62	100	255	165	30	30	750,-	963-132H	520,-
HFA 10T-3	10000	5000	6	90	72	100	275	185	40	40	1180,-	963-133H	730,-



Compact crane scale for use in harsh environmental conditions or where space is limited, with convenient hand-held terminal

#### Features

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STANDARD

- With the TÜV certification mark, the scale meets the requirements of the standard EN 13155 (Non-fixed load lifting attachments/ Breakage resistance) and EN 61010-1 (Electrical safety)
- With its high-quality finish, low weight and compact dimensions, this crane scale (tensile force gauge) is an essential device for industrial use, on building sites, in freight centres, ports etc.
- Because of its compact design it is also ideally suited for installation in systems where space is limited, etc.
- · Peak load display (peak hold)

BATT

oad eceptors

- Hold function: When the weighing value remains unchanged the weight indicated on the display is automatically "frozen" until the Hold key is pressed
- Tare: Resets the display to "0" when there is a load on the scale. Now removed or added loads are directly displayed

ACCU

2

- I Display device with integrated radio module, which the user can carry around with him, thanks to the convenient hand strap I, standard. In this way the weighing data can always be read off the display device by the user, even when the user is a long way from the load receptor (force gauge) or under poor lighting conditions. Range up to 20 m, LCD display, digit height 23 mm, rechargeable battery pack internal, standard. Operating time up to 30 h without backlight, charging time approx. 12 h. Can be reordered, KERN HFC-A01, € 60,-
- Dimensions of display device W×D×H 85×64×256 mm
- Net weight 0,5 kg

#### **Technical data**

OPTION

ACCU

4

DAkks

+3 DAYS

- Large backlit LCD display, digit height 23 mm
  Material and design of housing/load support, models with
  - [Max] ≤ 3 t: aluminium/stainless steel bearing [Max] > 3 t: steel/steel

- Optional battery operation, 3×1.5 V AA not included in scope of delivery, operating time up to 40 h
- Precision: 0,2 % of [Max]
- Measuring frequency 10 Hz
- · Further weighing units: kg, lb, N
- Permissible ambient temperature 5 °C/35 °C

#### Accessories

- Internal rechargeable battery pack for load support, operating time up to 30 h, without backlight, charging time approx. 12 h
- I High-strength shackle, hot-dipped galvanised cast steel bracket, bow shaped. Scope of delivery: 2 shackles with lacquered screw bolts, suitable for models with
   [Max] ≤ 5t: KERN YSC-01, € 100, [Max] > 5t: KERN YSC-02, € 210,-
- B Hook with safety catch, cast steel, galvanised and lacquered, non-revolving. Scope of delivery: 2 shackles, 1 lacquered screw bolt, 1 hook, suitable for models with
- [Max] ≤ 1t: KERN YHA-01, € 170,-
- [Max] = 3t: KERN YHA-02, € 190,-
- [Max] = 5t: KERN YHA-03, € 230,-
- [Max] > 5t: KERN YHA-04, € 410,-

Model	Weighing capacity	Readability	adability Net weight		<b>Z</b> Dimensions					Dimensions					Price excl. of VAT	Option DAkkS Calibr. Ce	ertificate
KERN	[Max] kg	[d] g	approx. kg	A	B	С	D	E	F	G	ex works €	DAkkS	€				
HFC 600K-1	600	200	1,8	mm 90	mm 62	mm 100	mm 255	mm 165	mm 32	mm 30	980,-	KERN 963-130H	210,-				
HFC 1T-4	1000	500	1,8	90	62	100	255	165	32	30	980,-	963-130H	210,-				
HFC 3T-3	3000	1000	2,2	90	62	100	255	165	32	30	1040,-	963-132H	520,-				
HFC 5T-3	5000	2000	4,0	90	62	100	255	165	30	30	1120,-	963-132H	520,-				
HFC 10T-3	10000	5000	6	90	72	100	275	185	40	40	1550,-	963-133H	730,-				



Robust, high-resolution crane scale up to 12 t, now also with EC type approval [M] or protection type IP67



High mobility thanks to rechargeable battery operation, compact, lightweight construction, it is suitable for the use in several locations (production, warehouse, dispatch department etc.)



Solid shackles, non-revolving



Radio remote control standard. Range up to 20 m. All functions can be selected. W×D×H 65×24×100 mm. Batteries included, 1× 12 V 23A

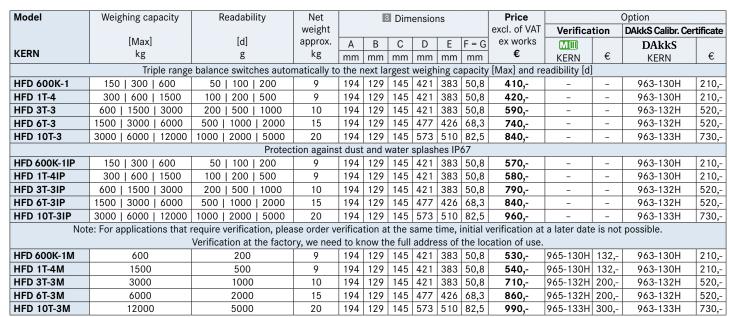
#### Crane scale KERN HFD



#### Features

- The models with M add-on have EC type approval and because of this they are ideal for use in verified applications such as, for example, calculation of a total price, based on weight
- The models with IP add-on have special spray and dust protection to IP67 and because of this they are ideal for use in harsh environments
- With the TÜV certification mark, the scales meet the requirements of the standard EN 13155 (Non-fixed load lifting attachments/ Breakage resistance) and EN 61010-1 (Electrical safety)
- Because of its stable construction and robust design, it is ideal for continuous use in industrial environment
- High mobility: thanks to rechargeable battery operation, compact, lightweight construction, it is suitable for the use in several locations (production, warehouse, dispatch department etc.)
- Hold function: When the weighing value remains unchanged the weight indicated on the display is automatically "frozen" until the Hold key is pressed
- Tare: Resets the display to "0" when there is a load on the scale. Now removed or added loads are directly displayed

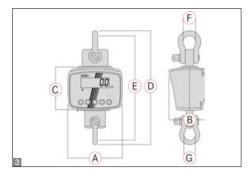
STANDARD						OPTION	FACTORY	
<b>i 666</b>				<b>.</b>	<b>.</b>	DAkkS	<b>8</b> M	
CAL EXT IP 67	ACCU	MULTI	DMS	1 DAY	2 DAYS	+3 DAYS	BT 4.0 +3 DAYS	
HFD-IP					HFD-6T-3M		HFD-M	





#### **Technical data**

- Superior display size: digit height 30 mm, bright backlight for easy reading of weighing results, even in poor lighting conditions
- Internal rechargeable battery pack, as standard, operating time up to 70 h without back light, charging time approx. 12 h. Battery pack accessible from the outside, which means it is easy to replace
- Precision: 0,2 % of [Max]
- Permissible ambient temperature -10 °C/40 °C



#### Accessories

- Internal rechargeable battery pack for load support, operating time up to 70 h without backlight, charging time approx. 12 h, KERN HFD-A04, € 90,-
- Charging station for external battery charging, scope of delivery: charging station, exchangeable battery, mains adapter, KERN HFD-A07, € 110,-
- Hook with safety catch, cast steel, galvanised and lacquered, non-revolving, suitable for models

HFD 600, HFD 1T: KERN HFD-A01, € 45,-HFD 3T: KERN HFD-A02, € 65,-HFD 6T, HFD 10T: KERN HFD-A03, € 120,-

Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, KERN HFD-A06, € 220,-



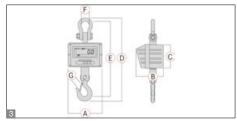
Robust industrial crane scale with bright LED display for optimum reading in unfavourable ambient conditions

#### Features

- With the TÜV certification mark, the scales meet the requirements of the standard EN 13155 (Non-fixed load lifting attachments/ Breakage resistance) and EN 61010-1 (Electrical safety)
- Professional device for robust applications in production, quality control, logistics etc. Because of its stable construction and robust design, it is ideal for continuous use in industrial environment
- High mobility: thanks to rechargeable battery operation, compact, lightweight construction, it is suitable for the use in several locations (production, warehouse, dispatch department etc.)

- Adaptation to unstable environmental conditions by changing the readability
- Hold function: When the weighing value remains unchanged the weight indicated on the display is automatically "frozen" until the Hold key is pressed
- Tare: Resets the display to "0" when there is a load on the scale. Now removed or added loads are directly displayed
- Hook with safety catch, revolving
- Radio remote control standard. Range up to 20 m. All functions can be selected (excl. ON/OFF). W×D×H 48×10×95 mm. Batteries included, 2×1.5 V AAA





#### **Technical data**

- Superior display size: digit height 30 mm, bright with high contrast for easy reading of weighing results, even in poor lighting conditions
- Internal rechargeable battery pack, operating time up to 50 h without backlight, charging time approx. 14 h
- Precision: 0,2 % of [Max]
- Permissible ambient temperature 0 °C/40 °C

STANDARD						OPTION
					<b></b>	DAkkS
CAL EXT	ACCU	MULTI	DMS	1 DAY	2 DAYS	+3 DAYS

Model	Weighing	Readability	Net weight			3	Dimensio	ons			Price		
	capacity										excl. of VAT	DAkkS Calibr. Ce	rtificate
	[Max]	[d]	approx.	А	В	С	D	E	F	G	ex works	DAkkS	
KERN	kg	g	kg	mm	mm	mm	mm	mm	mm	mm	€	KERN	€
HFM 1T0.1	1000	100	14	270	200	175	610	540	68	40	830,-	963-130H	210,-
HFM 3T0.5	3000	500	16	270	200	175	610	540	74	40	860,-	963-132H	520,-
HFM 5T0.5	5000	500	24	300	230	190	730	650	74	55	1150,-	963-132H	520,-
HFM 10T1 4	10000	1000	34	300	230	190	840	750	92	60	1530,-	963-133H	730,-





#### Printers









#### Important note for printer orders:

Please state your balance model when ordering, so that the printer can be preconfigured in the factory to suit your balance.

#### Matrix needle printer KERN 911-013

For printing weighing results on normal paper, which is ideal for long-term archiving.

#### Matrix needle printer KERN YKN-01

For printing weighing results on normal paper, which is ideal for long-term archiving.

#### Thermal printer KERN YKB-01N

For printing weighing results, recipes, quantities etc. or for GLP record keeping of balance adjustment with date and time print. GLP/GMP compliant print form available as standard. Language versions: DE, EN, FR.

#### **Technical data**

- Needle print
- Speed: 1,8 line/s
- Max. 40 characters per line
- Width of the paper strip: 57 mm wide
- Operation via mains adapter 230 V/50 Hz (standard EU), as standard
- Dimensions housing: W×D×H 100×180×106 mm
- Not suitable for KERN PNS/PNJ, PES/PEJ ranges
- Interface cable not included with delivery, see page 166

Price printer without interface cable, KERN 911-013, € 440,-

#### Accessories

• Paper rolls (10 pcs.), KERN 911-013-010, € 37,-

• Universal mains adapter, standard EU/GB/ US, KERN ABS-A01, € 80,-

#### Technical data

- Needle print
- Speed: 1 line/s
- Max. 16 characters per line
- Width of the paper strip: 44 mm wide
- Operation via mains adapter 230 V/50 Hz (standard EU/GB/USA), as standard
- Dimensions housing: W×D×H 158×106×40 mm
- Interface cable not included with delivery, see page 166

Price printer without interface cable, KERN YKN-01, € 260,-

#### Technical data

- Thermal print
- Speed: 0,75 lines/s
- Max. 40 characters per line
- Width of the paper strip: 112 mm wide
- Operation via mains adapter 230 V/50 Hz (standard EU/GB/USA), as standard Dimensions housing: W×D×H 165×140×50 mm
- Interface cable not included with delivery, see page 166

Price printer without interface cable, KERN YKB-01N, € 330,-

#### Accessories

• Paper rolls (5 pcs.), KERN YKN-A01, € 35,-

#### Accessories

• Paper rolls (10 pcs.), KERN YKB-A10, € 55,-

Individual header data:

For printers KERN 911-013, YKN-01, YKB-01N and YKE-01 (in combination with YKI-02) the free software KERN SHM-01 (see www.kern-sohn.com) can be used to print 4 header lines on the printout (see marking on balance). Compatible models: KERN 440, DE, FCB, FKB-A, PCB, PCD.

#### Printers







RS 232 INTERN MUL

#### Important note for printer orders:

Please state your balance model when ordering, so that the printer can be preconfigured in the factory to suit your balance.

# Thermal statistics printer KERN YKS-01

For printing weighing results, recipes etc. or for GLP record keeping of weighing data with date and time print. Numerator; with statistical functions such as count and total of all measurements, minimum and maximum values of the main unit, range, average value, standard deviation, available units: mg, g, kg, pcs. Language versions: DE, EN, FR.

#### **Technical data**

- Thermal print
- Speed: 0,75 lines/s
- Max. 40 characters per line
- Width of the paper strip: 112 mm wide
- Operation via mains adapter 230 V/50 Hz (standard EU/GB/USA), as standard
- Dimensions housing: W×D×H 165×140×50 mm
- Interface cable not included with delivery, see page 166
- Note: Please order the matching paper roll with it, see accessories
- Not suitable for KERN EWJ, PFB-M ranges as well as KERN moisture analysers and counting scales

Price printer without interface cable, KERN YKS-01, € 400,-

#### Accessories

16

• Paper rolls (10 pcs.), KERN YKB-A10, € 55,-

#### Thermal label printer KERN YKE-01

Affordable universal label printer to print out weighing results on thermal labels. ASCII-capable. Comfortable Auto-Forward function for automatic jump from label to label (only with KERN standard labels).

#### **Technical data**

- Thermal print
- Speed: 22 mm/s
- Max. 82 characters per line
- Width of the paper strip: YKE-A02: 78 mm YKE-A03: 112 mm
- Operation via mains adapter 230 V/50 Hz (standard EU/GB/USA), as standard
- Dimensions housing: W×D×H 150×155×65 mm
- Interface cable not included with delivery, see page 166
- Note: Please order the matching label roll with it, see accessories
- Not suitable for KERN BFS, CCS, CFS, DAB, DBS, DLB, IFS, KFS-TM, RPB ranges, counting scales

Price printer without interface cable, KERN YKE-01, € 620,-

#### Accessories

Paper roll (1 pc.), Dimensions labels: W×D 73×61 mm, 100 labels, KERN YKE-A02, € 30,-W×D 105×48 mm, 45 labels, KERN YKE-A03, € 30,-

#### Individual header data:

For printers KERN 911-013, YKN-01, YKB-01N and YKE-01 (in combination with YKI-02) the free software KERN SHM-01 (see www.kern-sohn.com) can be used to print 4 header lines on the printout (see marking on balance). Compatible models: KERN 440, DE, FCB, FKB-A, PCB, PCD.

#### Printers





#### Important note for printer orders:

Please state your balance model when ordering, so that the printer can be preconfigured in the factory to suit your balance.

• 6888. •

RS 232

#### Dot matrix printer KERN YKG-01

High-quality dot matrix printer

Flexible and rapid dot matrix printer for retail, the catering trade and for restaurant kitchens. To print the weights on normal paper, which is ideal for long-term archiving. This model has an interchangeable interface and you will be impressed by how easy it is to replace the paper and ribbon

#### **Technical data**

- Needle print
- Speed: 4,7 line/s
- Max. 42 characters per line
- Supported paper widths:
   58 mm, 70 mm, 76 mm (roll)
- Operation via mains adapter 230 V/50 Hz standard EU, as standard
- Interfaces: RS-232, cash drawer connection, bidirectional parallel
- Interface cable not included with delivery, see page 166
- Dimensions housing B×T×H 160×248×139 mm
- Not suitable for KERN DAB, DBS, DLB, FKT, RFE ranges

Price printer without interface cable, KERN YKG-01, € 550,-

#### Accessories

• Paper rolls (5 pcs.), KERN YKG-A01, € 30,-

#### Thermal printer KERN YKH-01

High-quality thermal printer – fast, robust, user-friendly

Robust, low-maintenance dot matrix printer for retail, the catering trade and for restaurant kitchens. Extremely compact and long-lasting. Thanks to the waterproof switch cover it is particularly suitable for use under tough, loud environmental conditions

#### **Technical data**

- Thermal print
- Speed: 2 line/s
- Max 64 characters per line
- Supported paper widths: 58 mm, 80 mm (roll)
- Operation via mains adapter 230 V/50 Hz standard EU, as standard
- Interfaces: RS-232
- Interface cable not included with delivery, see page 166
- Dimensions housing B×T×H 140×199×146 mm
- Not suitable for KERN DAB, DBS, DLB, FKT, RFE ranges

Price printer without interface cable, KERN YKH-01, € **390,-**

#### Accessories

• Paper rolls (5 pcs.), KERN YKH-A01, € 30,-

16

Individual header data:

For printers KERN 911-013, YKN-01, YKB-01N and YKE-01 (in combination with YKI-02) the free software KERN SHM-01 (see www.kern-sohn.com) can be used to print 4 header lines on the printout (see marking on balance). Compatible models: KERN 440, DE, FCB, FKB-A, PCB, PCD.



#### Accessories

#### Interface cable for RS-232

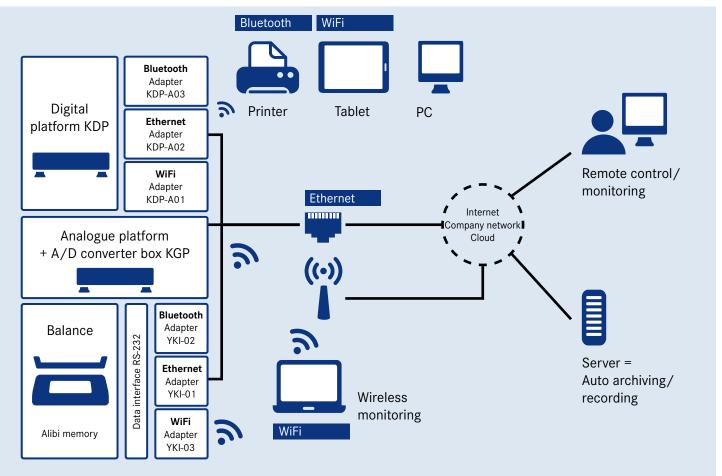
For direct connection to a printer or PC, cable length approx. 1.5 m. The interface parameters can be set using the balance keypad.



The interface cable is **free of charge** if you purchase balance, printer or Ethernet-/WiFi-/Bluetooth adapter together.

Printer,	PC, YKI-01/	911-013, YKB-01N,	YKE-01	YKG-01, YKH-01	YKS-01	Price cable excl. of VAT
Balance <b>V</b>	-02/-03 KERN	YKN-01 KERN	KERN	KERN	KERN	ex works €
440, 572, 573, ALJ-AM, ALS-A, ALT-B, CDS, CKE, DE-D, DS, EMB-V, FCB, FKA, FKB, FKC, FKB-A, IKT, KB, PCB, PCD, PLJ-A, PLJ-F, PLS-A, PLS-F, PLE, PLT, KDP			572-926			46,-
BAN, BKN, BXS, IXS, KXS-TM, SXS		KXS-A	04 (Factory	Option)		100,-
EOC, IOC, BID, KIB-T, KIB-TM			EOC-A12			16
YKV-01, KGP	572-926			-		46,-
ABJ-NM, ABS-N			ACS-A01			100,-
BFA, BFB, BFN (until year of construction 2019), GAB-N, GAB-P, GAT, IFB, KFB-TM, KFN-TM, NFB, NFN (until year of construction 2019) PFB, SFB, UFA, UFB, UFC, UFN			CFS-A01			
BFS, CPB, EWJ, KFS-TM, IFT, PFB, PFB-M		CFS	-A01		-	l I
CFS, CCS, KFS-TM, IFS (from year of production 2015)	-	CFS-A01	-	-	-	l I
ABT-NM, PBJ, PBS			770-926			
DBS, DLB	572	-926	-	-	-	
DAB	MLB	-A05	MLB-A05	-	MLB-A05	46,-
ABP, KFS-T		MLE	3-A05		-	
ADB, ADJ, ACS, ACJ, PNS/PNJ			MLB-A05			
HFT			KFF-A01			
EG-N, EW-N			474-926			l
PES/PEJ (Interface cable for printer YKB-01: MLB-A05)			+/4-720			I
CCA			CCA-A01			
RFE, RPB (not compatible with YKN-01)	-	CFS-A01	-	CFS-A01	-	

#### With products from KERN you are ready to face the challenges of Industry 4.0



We will help to combine industrial production with the latest information and communication technology, with the aim of improving quality, reducing costs and using time and resources more efficiently so that you are able to react to future requirements in a more flexible manner. You will benefit from our uniform data protocol combined with our BalanceConnection 4.0 data software, for details please see page 167/168.

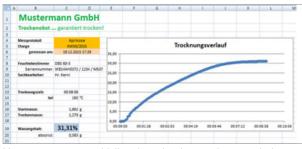
#### KERN Software BalanceConnection SCD-4.0

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Easy transfer and editing of measuring results e.g. in Microsoft® Excel



Full overview of devices, outputs, queries, interfaces, etc. shown on the output window immediately.



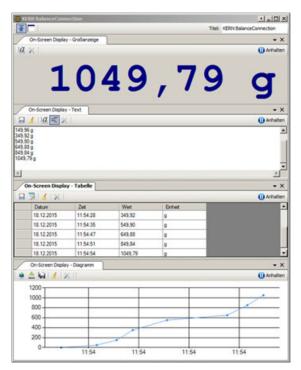
Measurement report with line chart showing a moisture analysis

# Flexible recording or transfer of measurements, particularly to Microsoft<sup>®</sup> Excel or Access

#### Features

- For operating systems Windows XP, Vista, 7, 8, 8.1, 10
- Supports balances measuring devices with RS 232, RS 485, Bluetooth, LAN or WiFi network (TCP/UDP/IP)
- Highly flexible formatting of the output (any order, formatting and rounding), particularly recording of date and time for every value transferred, if required
- Any number of devices/interfaces can be connected, as well as simultaneous and synchronised recording of several balances
- Key-activated or time-controlled interrogation of measurements or trigger of device functions, also for continuous recording
- The interface protocols for KERN balances are already predefined (standard configuration)

- Compatible interface cable included when you order a KERN balance at the same time
- Many different transfer and recording options:
- Microsoft<sup>®</sup> Excel/Access/Word in the foreground or background
- Other Windows applications (through key simulation), e.g. shipping software or ERP system (SAP, Sage, etc.)
- File recording (e.g. as text or CSV file)
- Print out on text or label printer
- Screen output such as large display, line chart (drying curve for moisture analyser), histogram, etc.



Different on-screen displays with export function



Do you have any questions? The team from our Industry 4.0 centre of expertise will be happy to help: e-mail: ITsupport@kern-sohn.com Or download a free demo version of the BalanceConnection software: http://balanceconnection.kern-sohn.com/demo

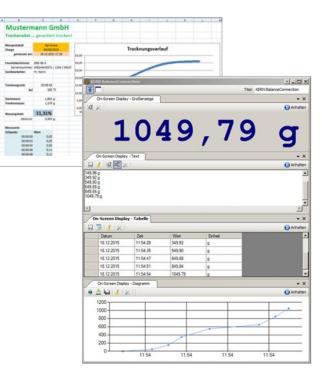
#### Benefits

- Typing errors during e.g. manual transfer are avoided
- Automatic recording, e.g. for long-term tests
- GLP-compliant lab software
- Can be used across different branches and applications
- Also available as a cost-optimised package
- with 5 licenses, **you save more than 30 %!** • Also available immediately as a download
- license • Scope of supplies: 1 CD, 1 license,
- KERN SCD-4.0, € 170,-
- Scope of supplies: 1 CD, 5 licenses, KERN SCD-4.0-S05, **€ 780,-**
- Scope of supplies: Download link for 1 license, KERN SCD-4.0-DL, € 170,-

#### KERN Software BalanceConnection SCD-4.0 Pro

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	KERN



Professional and highly flexible recording or transmission of measured values, in particular also to Microsoft<sup>®</sup> Excel or Access

#### Features

- For operating systems Windows XP, Vista, 7, 8, 8.1, 10
- Supports balances measuring devices with RS 232, RS 485, Bluetooth, LAN or WiFi network (TCP/UDP/IP)
- Highly flexible formatting of the output (any order, formatting and rounding), particularly recording of date and time for every value transferred, if required
- Any number of devices/interfaces can be connected, as well as simultaneous and synchronised recording of several balances
- Key-activated or time-controlled interrogation of measurements or trigger of device functions, also for continuous recording
- The interface protocols for KERN balances are already predefined (standard configuration)
- Compatible interface cable included when you order a KERN balance at the same time
- Many different transfer and recording options:
  - Microsoft<sup>®</sup> Excel/Access/Word in the foreground or background
- Other Windows applications (through key simulation), e.g. shipping software or ERP system (SAP, Sage, etc.)
- File recording (e.g. as text or CSV file)
- Print out on text or label printer
- Screen output such as large display, line chart (drying curve for moisture analyser), histogram, etc.

#### Additional features of the BalanceConnection PRO version:

- ODBC/SQL databases such as SQL Server or MySQL
- Transfer to HTTP Webservices/Web formsHistogram
- Enables the connection of medical balances to practice EDP systems using the device data transfer protocol (GDT) and also the HL7 protocol
- Implementation of programs/scrips using freely-definable command lines
- Command sequences
- Defining the conditions for specific events and the reaction to these events
- Filter for stability recognition (configurable value storage)
- Central configuration repository, e.g. on the network
- On-screen displays with configurable user interface for flexible balance operation

#### **Benefits**

- Ideal software where weighing data which has been collected needs to be transferred to a Windows PC
- Particularly suitable for professional integration of weighing systems into existing networks where there is a high demand for automated data transfer and further processing, for integration of databases
- Automatic recording, e.g. for long-term tests
- GLP-compliant lab software
- Can be used across different branches and applications
- Also available as a cost-optimised package with 5 licenses, you save more than 30 %!
- Also available immediately as a download license
- Scope of supplies:
- 1 CD, 1 License
- KERN SCD-4.0-PRO, **€ 310,-**
- Scope of supplies: 1 CD, 5 Licenses
- KERN SCD-4.0-PROS05, € 1200,-
- Scope of supplies: Download link for
- 1 License, KERN SCD-4.0-PRO-DL, € 310,-

#### Accessories



#### RS-232/Ethernet adapter KERN YKI-01

Adapter to connect balances, force measuring devices etc. with an RS-232 interface 2 to an IP-based Ethernet network 1. The adapter allows direct integration of measuring devices into most company networks, with automatic configuration using DHCP or statistical IP allocation. You can access the current measuring data at any time from within the whole network, without having to use additional cables. The adapter supports a wide range of configurational options using the enclosed administration software or by the web interface. The driver delivered with the goods allows you to access the measuring device with existing, non-network-compatible applications using a virtual COM port. Compatible with KERN BalanceConnection software. DIN track mount I or free-standing.

Scope of delivery: RS-232 Ethernet adapter with 1x Port RS-232 **1**, mains adapter **4**, CD (driver, software, operating instructions), adhesive feet, (interface cable see page 167),

KERN YKI-01, € 310,-

#### RS-232/WiFi adapter KERN YKI-03

High-quality adapter for the wireless connection of balances, force measuring devices etc. with RS-232 interface to WiFi-enabled devices, such as tablets, laptops, Smartphones etc. In this way, where there is a physical separation or a large distance between the devices, the weighing data from one or several balances can be easily transferred without cable to a WiFi device or a network (relevant software on the WiFi device needed, not included in delivery). The adapter allows direct integration of measurement devices into most company networks, with automatic configuration using DHCP or statistical IP allocation. You can access the current measuring data at any time from within the whole network, without having to use additional cables. The adapter supports a wide range of configurational options using the enclosed administration software or by the web interface. The driver delivered with the goods allows you to access the measurement device with existing, non-network-compatible applications using a virtual COM port. Compatible with KERN Software BalanceConnection.

The adapter also has an Ethernet interface for a wired connection to an IP-based Ethernet network **1**. Thanks to the screw terminals **2**, the power connection can be implemented individually using individual wires or using the robust, screw-in power connector **3**. Large input voltage range from 12 V-48 V. Suitable for wall mounting and DIN track mount **4** or free-standing.

Scope of delivery: RS-232/WiFi adapter, mains adapter, network cable (1 m), driver CD, (interface cable see page 167),

KERN YKI-03, € 740,-





Note: To connect to your network, you will need information from your network administrator. We recommend discussing connecting your device into your network with the administrator before you place your order.

Note: If you order a KERN balance at the same time, then the interface cable is free of charge (please specify balance model).

STANDARD

RS 232



#### RS-232/Bluetooth adapter KERN YKI-02

Adapter for the wireless connection of balances, force measuring devices etc. with an RS-232 interface to Bluetooth devices, such as Bluetooth printers, tablets, laptops, Smartphones etc. In this way, where there is a physical separation or a large distance between the devices, the weighing data from one or several balances can be easily sent without cable and printed on a Bluetooth printer or transferred to a Bluetooth device (you would need the relevant software on the Bluetooth device, not included with the delivery). The compact adapter with its attractive design can usually be connected directly to the balance **1**, e.g. an additional interface cable would not be necessary. Bluetooth adapter will be powered by the balance (if compatible) or with the mains adapter which is supplied as standard 2. Range up to 100 m outside, depending on obstacles, such as, walls, the sensitivity and type of antenna of the receiver. Intersections of sending and receiving lines using the DCE/DTE switch S. Compatible with KERN Software BalanceConnection.

Scope of delivery: RS-232/Bluetooth adapter, mains adapter (EU/UK/USA/AUS/CH) 2, USB-A to Mini-USB-B cable 4, gender changer 5, driver CD, (interface cable see page 167),

KERN YKI-02, € 310,-



Note: To connect to your network, you will need information from your network administrator. We recommend discussing connecting your device into your network with the administrator before you place your order.

Note: If you order a KERN balance at the same time, then the interface cable is free of charge (please specify balance model).



#### Large display KERN YKD-A02

with superior display size, digit height 3" (76 mm). Luminescent, red LED display for easy reading of weight, even from a distance or under poor lighting conditions. 6 segments, mains connection as standard (230 V, EU/GB), connection using RS-232 data interface, dimensions W×D×H 541×55×180 mm.

Suitable for series IFB, BFB, NFB, UFA, UFB,

KERN YKD-A02, € 260,-



#### Signal lamp KERN CFS-A03

Signal lamp for visual support of weighing with tolerance range. Three-colour LED, red, green, yellow. Power supply via balance using RS-232. Total dimensions W×D×H 100×180×300 mm

Suitable for series BFB, BFN, BID, CKE, CPB-N, GAB-N, GAB-P, IFB, IFS, IOC, KFB-TM, KFN-TM, KIB-TM, NBB, NFB, NFN, SFB, UFA, UFB, UFC, UFN,

KERN CFS-A03, € 280,-



#### Power supply adapter set KERN YKA-02

from standard EU to GB/US/AUS/CH etc. Four pieces. Ideal for devices with Class II protection (not earthed). Ideal for Euro moulded plug,

KERN YKA-02, € 35,-



# 2nd RS-232 data interface KERN CFS-A04

separate Y cable, e.g. for simultaneous connection of a a printer and a signal lamp.

Suitable for series BAN, BFB, CFS, CPB-N, GAB-N, GAB-P, IFB, KFB-TM, NFB, NFN, UFN, UFA, UFB, SFB,

KERN CFS-A04, € 35,-



#### RS-232/USB adapter KERN AFH 12

to connect peripheral devices with USB connection, fits on all balances and measuring instruments with RS-232 port.

Please order the appropriate RS-232 interface cable for your balance at the same time, see table on page 166

Scope of delivery: Converter cable, CD with driver,

KERN AFH 12, € 85,-



#### Accessories



#### Stand (tripodal) KERN YKP-01

stable and robust, to elevate display device, stainless steel, height-adjustable, large three-legged adjustable foot, height of stand approx. 750–1000 mm, Factory Option.

Suitable for series BFA, BBB, BFN, BBN, KEN-TM, NFN, SFB (from weighing plate size W×D 500×400 mm), UFN,

KERN YKP-01, € 380,-



#### Stand (tripodal) KERN YKP-02

stable and robust, to elevate display device, stainless steel, height-adjustable, large three-legged adjustable foot, height of stand approx. 750–1000 mm, Factory Option.

Suitable for series BFB, BXS, BFS, BFA, BBB, BBN, BKN, IFS, IFB, KFE-TM, KXG-TM, KXS-TM, KEN-TM, NFB, NBB, SFE, UFA, UFB, UFC,

KERN YKP-02, € 200,-



#### Protective dust cover KERN ABS-A08

For protection from dust and light.

Suitable for all KERN analytical balances and precision balances with glass draught shield,

KERN ABS-A08, € 30,-



#### Tare pan KERN RFS-A02

Made of stainless steel, which makes cleaning easy and hygienic. Ideal for weighing loose screws, small parts as well as fruit, vegetables, cheese, etc.

- W×D×H 370×240×20 mm
- Net weight approx. 524 g

KERN RFS-A02, € 65,-

16



# Tare pan with pan beam KERN CH-A01N

Made of stainless steel. Ideal for weighing loose small parts as well as fruit, vegetables etc. Max. load 30 kg. Removable tare pan which makes cleaning easy and hygienic.

Suitable for models KERN CH 15K20, HCB 20K10, HCN 20K50IP, HDB-N, HDB-XL

- Dimensions: tare pan, Ø/H 160×40 mm (dim. outside), 240×40 mm (dim. inside)
- Pan beam: W×D×H
   290×240×300 mm
   200×240×300 mm
- 290×240×340 mm (incl. tare pan)
- Total net weight approx. 500 g

KERN CH-A01N, € 85,-



Universal density set KERN YDB-03

Universal density set for precise and convenient density determination of liquids and solids  $\leq \geq 1$ . Suitable for all current KERN analytical balances.

Scope of delivery: Beaker ( $\emptyset$ ×H 84×113 mm), thermometer, sample holder, adapter, equalising weights, volume plummet (stainless steel, 20 g), universal submersible basket for solid bodies which float and sink. The wire of the submersible basket has a diameter of 0.5 mm and therefore complies with the requirements of DIN EN ISO 1183-1 (test methods for the determination of density of non-foamed plastics), KERN YDB-03, € 390,-

#### Optional:

Density determination of the volume plummet, DAkkS calibration certificate with all data relating to the density and volume, KERN 962-335V, € **157,**-



#### Ioniser to neutralise electrostatic charge KERN YBI-01A

Goods to be weighed which are non-conductive, such as plastic, china, glass, etc often carry electrostatic charge. The electromagnetic field which then occurs between the goods to be weighed and the balance can cause the weighing result to be distorted by up to a gramme. Therefore, when weighing in milligrammes or even smaller increments, we recommend neutralising the electrostatic charge with the KERN AC-Korona discharge ioniser. With feet II supplied with the ioniser, it can be positioned conveniently next to the balance or you can manually direct it from all sides onto a particular item to be weighed.

- Discharge of ozone 0,05 ppm/h
- Total dimensions W×D×H
   115×100×60 mm (Adjustable foot retracted),
   115×110×80 mm (Adjustable foot folded out)
- Net weight approx. 0,31 kg
- Mains connection 100–240 V, 50/60 Hz, AC power supply, DC 12 V, 500 mA, output,

KERN YBI-01A, € 890,-







#### Weighing table KERN YPS-03

The KERN YPS-03 weighing table has been constructed to absorb vibrations and oscillations, which would otherwise distort the weighing result.

The YPS-03 weighing table consists of:

- a heavy, polished granite slab (24 kg) and is positioned on absorbing rubber components and is used as a surface on which to stand the analytical balance
- a work table, the work surface of which surrounds the slab and offers many storage options. The sturdy powder-coated steel frame has four height-adjustable feet, which can be used to accurately level the weighing table if the floor is at all uneven
- You can work in an ergonomic way at the weighing table whether you are in a standing or seated position. The inlet on the front of the table offers enough space for you to sit down and operate the scale without touching the weighing table.
- All surfaces are hygienic and easy to clean
- Suitable for all KERN analytical balances with total dimensions ≤ W×D 300×400 mm
   Total dimensions W×D×H
- 785×600×800 mm (Height adjustable) • Dimensions granite slab, W×D×H
- 300×400×80 mm
- Net weight approx. 46 kg

Ready for shipping in 2 working days. Dispatch complete on pallet, simple self-assembly. Please ask for dimensions, gross weight, shipping costs,

KERN YPS-03, € 890,-

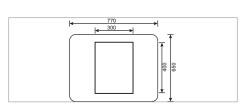


# Anti-vibration granite plates KERN YPS-04, -05, -06

- The KERN YPS-04, -05, -06 anti-vibration granite plates are designed to dampen shocks and vibrations that would otherwise distort the weighing results of high precision Laboratory Scales and analytical balances. Also ideal for vibration-free microscope set-up
- The anti-vibration granite plate is made of polished granite, which is supported through absorbent rubber elements
- The anti-vibration granite plate can be used ergonomically while standing or sitting comfortably
- Compact size, practical for small spaces
- All surfaces are hygienic and easy to clean
- Suitable for all KERN analytical balances, precision balances and microscopes with the corresponding dimensions
- Overall dimensions, W×D×H YPS-04: 400×450×60 mm YPS-05: 565x450x60 mm YPS-06: individual dimensions, according to your requirements
- Net weight approx. YPS-04: 30 kg YPS-05: 35 kg YPS-06: on request

Ready for shipping in 2 working days. Dispatch complete on pallet. Please ask for dimensions, gross weight, shipping costs,

KERN YPS-04, **€ 500,-**KERN YPS-05, **€ 550,-**KERN YPS-06, on request



2 DAYS









#### Roller conveyor KERN YRO-01/ YRO-02/ YRO-03

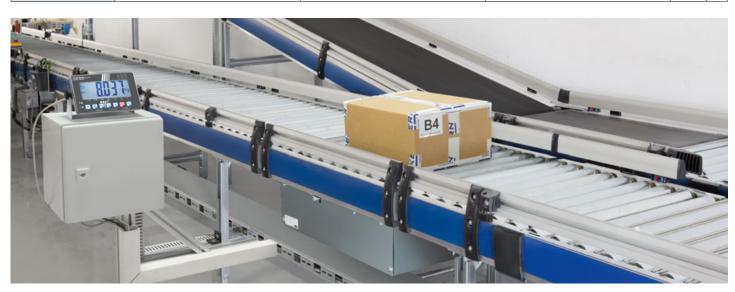
Through the smooth-running KERN roller conveyor attachments, KERN YRO, you can convert your platform scale into a robust measuring system for rapid and flexible weight determination in conveyor applications

Especially suitable for use in production and dispatch lines, where time means money. The goods or packages can either be weighed as they pass over the balance or, at fixed stations, heavy goods can easily be pushed onto the scale thanks to the roller conveyor and moved onto the connected roller conveyor

- Simply connect the roller conveyor attachment to a platform (e.g. KERN IFB, IFS, IXS, KFP, KXP, SXS) – done!
- Robust aluminium profile frame. The modular design means that you can easily disassemble it for cleaning or to replace individual components
- Smooth-running, hot-dip galvanised steel rollers with ball bearings
- Conductive rollers
- · Suitable for use in dry environments
- Roller distance approx. 30 mm
- Direction of movement is lengthways

- Scope of delivery: 1 roller conveyor attachment (without scale)
- We are happy to adapt the roller conveyor to your scale, adjust the preload or switch-on tolerance, etc. Please ask for your individual offer, your personal KERN contact person will be happy to help you

Model	Total dimensions	Suitable for platforms	Total net weight	Price
	W×D×H	with weighing plate sizes	approx.	excl. of VAT
		W×D		ex works
KERN	mm	mm	kg	€
YRO-01	405×305×130	400×300	6	660,-
YRO-02	505×405×130	500×400	9	680,-
YRO-03	655×505×130	650×500	12	970,-



# Test weights

#### 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 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 the calibration service section on page 202.

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 215–217

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  $I \ge 100,000 \text{ e}$
- 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  $\leq$  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**<sup>+</sup> TEST WEIGHTS

**Note:** Our highly-accurate OIML test weights are also available as **PREMIUM<sup>+</sup>** 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<sup>+</sup> 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<sup>+</sup> 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, he 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







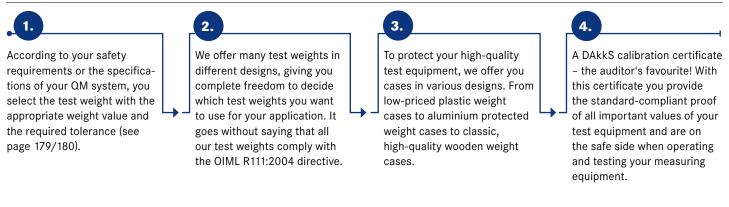
#### Our KERN weight cases at a glance:



#### 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. In 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.	
Weight		Individual v compact sh		Individual w knob shape		Plastic box		Aluminium box	n protected	Wooden	box		DAkkS cer	rtificate
		KERN	¢	KERN	€	KERN	e	KERN	<b>₽</b> €	KERN	ŔŔ	€	KERN	€
1 g	0,03	316-01	36,-	317-01	52,-	317-020-400	4,-	317-010-60	00 14,-	317-010	-100	26,-	962-331	30,-
2 g	0,04	316-02	36,-	317-02	53,-	317-020-400	4,-	317-020-60	00 14,-	317-020	-100	26,-	962-332	30,-
5 g	0,05	316-03	37,-	317-03	56,-	317-030-400	4,-	317-030-60	00 14,-	317-030	-100	26,-	962-333	30,-
10 g		316-04	38,-	317-04	60,-	317-040-400	4,-	317-040-60	00 10					30,-
20 g	0,08	316-05	43,-	317-05	68,-	317-050-400	A							
		216-06	46,-	317-06	73	317.04								

Weight	Knob shape in plastic case		Knob shape in al protected case	uminium	Knob shape in wooden case		DAkkS cer	tificate
	KERN	e	KERN	Ξ ε	KERN	e	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,-	333-04		042 405	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 better.

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  $\pm$  mg" at the respective weight and table at page 180.

#### 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  $\pm$  10 mg tolerance and 2 kg weight size, can be found in accuracy class F1. KERN-No 326-12, see page 186.

**Exception, analytical balances** (readout  $[d] \le 0,1$  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

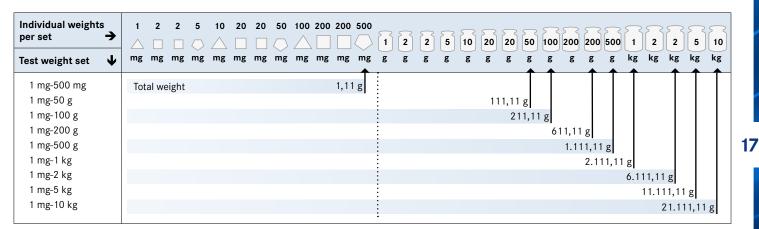






			4		
Test weight →	Knob shape with lifting knob, polished	Compact shape with carrying grip, polished	knob, polished	ECO shape, polished stainless steel	Knob shape with lifting knob, finely turned
Features 🗸	stainless steel	stainless steel	stainless steel		stainless steel
Conforms to OIML:R111	yes	yes	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
<b>Marking</b> (Milligram weights, generally none)	no	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 equip- ment in QM systems (e.g. ISO 9000 ff)	yes	yes	yes	yes	yes
Benefits	<ul> <li>High-quality test weight for analytical and precision balances</li> <li>Highly-refined surface</li> <li>Ideal shape of the top for good grip</li> </ul>	<ul> <li>Affordable test weight for analytical and precision balances</li> <li>Highly refined surface</li> </ul>	<ul> <li>Ideal, high-quality test weight for precision balances</li> <li>No visible adjustment chamber</li> <li>High long-term stability</li> <li>Ideal shape of the top for good grip</li> </ul>	<ul> <li>Affordable test weight for analytical and precision balances</li> <li>Highly refined surface</li> <li>Optimum shape of the top for good grip</li> </ul>	<ul> <li>Ideal test weight for commercial and indus- trial scales</li> <li>Ideal shape of the top for good grip</li> </ul>

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



#### 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<sup>3</sup>, air density is  $1.2 \text{ kg/m}^3$  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 215–217

lominal value	OIML R111:2004 Maximum permissible errors for weights = permissible tolerances "Tol ± mg"										
¥	E1	E2	F1	F2	M1	M2	М3				
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



/**/** 

<u>, </u>

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  $\leq$  500 g



Wooden box, lined, for individual weights  $\geq$  1 kg



set in plastic box set in aluminium (308-42)

Milligram weight Milligram weight

protected box,

lined (308-426)



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



(**)q**/

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



Wooden case, lined, for weight sets, knob shape

### Class E1 · Milligram weights, wire shape, stainless steel

Test weight material: stainless steel

Weight	Tol +/- mg	Milligram weight, wire shape	Plastic box			Aluminium protected box			DAkkS certificate	
		KERN €	KERN	€	KERN 🗗	€	KERN	€	KERN	€
1 mg	0,003	308-31 <b>65,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-251	63,-
2 mg	0,003	308-32 <b>65,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-252	63,-
5 mg	0,003	308-33 <b>65,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-253	63,-
10 mg	0,003	308-34 <b>65,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-254	63,-
20 mg	0,003	308-35 <b>65,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-255	63,-
50 mg	0,004	308-36 <b>65,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-256	63,-
100 mg	0,005	308-37 <b>65,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-257	63,-
200 mg	0,006	308-38 <b>65,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-258	63,-
500 mg	0,008	308-39 <b>65,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-259	63,-

### Class E1 · Individual weights, knob shape, stainless steel polished

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 certif Recalibration	
		KERN €	KERN	€	KERN 🗖	€	KERN	€	KERN €	KERN	€
1 g	0,010	307-01 <b>87,-</b>	317-020-400	4,-	317-010-600	14,-	317-010-100	26,-	963-231 <b>230,-</b>	962-231 R	63,-
2 g	0,012	307-02 <b>95,-</b>	317-020-400	4,-	317-020-600	14,-	317-020-100	26,-	963-232 <b>230,-</b>	962-232 R	63,-
5 g	0,016	307-03 <b>98,-</b>	317-030-400	4,-	317-030-600	14,-	317-030-100	26,-	963-233 <b>230,-</b>	962-233 R	63,-
10 g	0,020	307-04 <b>106,-</b>	317-040-400	4,-	317-040-600	14,-	317-040-100	26,-	963-234 <b>230,-</b>	962-234 R	63,-
20 g	0,025	307-05 <b>113,-</b>	317-050-400	4,-	317-050-600	14,-	317-050-100	26,-	963-335 <b>230,-</b>	962-235 R	63,-
50 g	0,030	307-06 <b>135,-</b>	317-060-400 <b>5</b> ,	20	317-060-600	14,-	317-060-100	28,-	963-236 <b>230,-</b>	962-236 R	63,-
100 g	0,050	307-07 <b>170,-</b>	317-070-400 <b>5</b> ,	20	317-070-600	14,-	317-070-100	30,-	963-237 <b>230,-</b>	962-237 R	63,-
200 g	0,100	307-08 <b>210,-</b>	317-080-400	6,-	317-080-600	14,-	317-080-100	30,-	963-238 <b>230,-</b>	962-238 R	63,-
500 g	0,250	307-09 <b>280,-</b>	317-090-400 <b>7</b> ,	40	317-090-600	15,-	317-090-100	32,-	963-239 <b>230,-</b>	962-239 R	63,-
1 kg	0,500	307-11 <b>450,-</b>	317-110-400	9,-	317-110-600	22,-	317-110-100	52,-	963-241 <b>230,-</b>	962-241R	63,-
2 kg	1,000	307-12 <b>630,-</b>	317-120-400 <b>1</b>	2,-	317-120-600	26,-	317-120-100	59,-	963-242 <b>510,-</b>	962-242 R	77,-
5 kg	2,500	307-13 <b>1060,-</b>	317-130-400 <b>2</b>	3,-	317-130-600	45,-	317-130-100	86,-	963-243 <b>510,-</b>	962-243R	77,-
10 kg	5,000	307-14 <b>1620,-</b>	317-140-400 <b>2</b>	3,-	317-140-600	63,-	317-140-100	104,-	963-244 <b>510,-</b>	962-244 R	77,-
20 kg	10,000	307-15 <b>4200,-</b>	-	-	317-150-600	110,-	317-150-100	580,-	963-245 <b>1280,-</b>	962-245 R	650,-
50 kg	25,000	307-16 <b>8050,-</b>	-	-	317-160-600	240,-	317-160-100	690,-	963-246 <b>1500,-</b>	962-246 R	730,-

\* 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, stainless steel polished

Test weight material: stainless steel polished

0	-									
Weight set	· ·		Knob shape in alu- minium protected case Knob shape in wooden case		DAkkS certificate Initial calibration*		DAkkS certificate Recalibration			
	KERN	€	KERN E	€	KERN	€ N	KERN	€	KERN	€
1 mg – 500 mg	308-42	900,-	308-426	870,-			962-250	405,-	962-250 R	405,-
1 mg – 50 g	303-024	1550,-	303-026	1570,-	303-02	1600,-	963-201	1300,-	962-201R	670,-
1 mg - 100 g	303-034	1730,-	303-036	1750,-	303-03	1780,-	963-202	1420,-	962-202 R	690,-
1 mg - 200 g	303-044	2140,-	303-046	2160,-	303-04	2190,-	963-203	1640,-	962-203 R	760,-
1 mg - 500 g	303-054	2470,-	303-056	2490,-	303-05	2520,-	963-204	1740,-	962-204 R	790,-
1 mg – 1 kg	303-064	2910,-	303-066	2930,-	303-06	2990,-	963-205	1850,-	962-205 R	850,-
1 mg – 2 kg	303-074	4210,-	303-076	4230,-	303-07	4290,-	963-206	2410,-	962-206 R	900,-
1 mg – 5 kg	303-084	5370,-	303-086	5390,-	303-08	5490,-	963-207	2700,-	962-207 R	940,-
1 mg - 10 kg		-	303-096	7150,-	303-09	7250,-	963-208	3070,-	962-208 R	970,-
1 g - 50 g	304-024	900,-	304-026	920,-	304-02	950,-	963-215	940,-	962-215R	295,-
1 g - 100 g	304-034	1070,-	304-036	1090,-	304-03	1120,-	963-216	1030,-	962-216R	320,-
1 g - 200 g	304-044	1490,-	304-046	1510,-	304-04	1540,-	963-217	1250,-	962-217 R	385,-
1 g – 500 g	304-054	1800,-	304-056	1820,-	304-05	1850,-	963-218	1360,-	962-218R	425,-
1 g - 1 kg	304-064	2210,-	304-066	2230,-	304-06	2290,-	963-219	1490,-	962-219 R	450,-
1 g – 2 kg	304-074	3570,-	304-076	3590,-	304-07	3650,-	963-220	2090,-	962-220 R	520,-
1 g - 5 kg	304-084	4670,-	304-086	4690,-	304-08	4790,-	963-221	2450,-	962-221R	540,-
1 g - 10 kg		-	304-096	6490,-	304-09	6590,-	963-222	2850,-	962-222 R	580,-

## **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  $\leq 50$  g

Plastic box, lined, for individual weights  $\geq$  100 g



Aluminium protected box, lined, for individual weights



Wooden box, lined, for individual weights  $\leq$  500 g



Wooden box, lined, for individual weights ≥1 kg /*中*/



(318-22)

Milligram weight Milligram weight set in plastic box 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

### Class E2 · Milligram weights, flat polygonal sheet, stainless steel

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 <b>24,-</b>	347-009-400 <b>2,-</b>	317-009-600 <b>15,-</b>	338-090-200 <b>19,-</b>	962-351 <b>30,-</b>	
2 mg	0,006	318-02 <b>24,-</b>	347-009-400 <b>2,-</b>	317-009-600 <b>15,-</b>	338-090-200 <b>19,-</b>	962-352 <b>30,-</b>	
5 mg	0,006	318-03 <b>24,-</b>	347-009-400 <b>2,-</b>	317-009-600 <b>15,-</b>	338-090-200 <b>19,-</b>	962-353 <b>30,-</b>	
10 mg	0,008	318-04 <b>24,-</b>	347-009-400 <b>2,-</b>	317-009-600 <b>15,-</b>	338-090-200 <b>19,-</b>	962-354 <b>30,-</b>	
20 mg	0,010	318-05 <b>24,-</b>	347-009-400 <b>2,-</b>	317-009-600 <b>15,-</b>	338-090-200 <b>19,-</b>	962-355 <b>30,-</b>	
50 mg	0,012	318-06 <b>24,-</b>	347-009-400 <b>2,-</b>	317-009-600 <b>15,-</b>	338-090-200 <b>19,-</b>	962-356 <b>30,-</b>	
100 mg	0,016	318-07 <b>24,-</b>	347-009-400 <b>2,-</b>	317-009-600 <b>15,-</b>	338-090-200 <b>19,-</b>	962-357 <b>30,-</b>	
200 mg	0,020	318-08 <b>24,-</b>	347-009-400 <b>2,-</b>	317-009-600 <b>15,-</b>	338-090-200 <b>19,-</b>	962-358 <b>30,-</b>	
500 mg	0,025	318-09 <b>24,-</b>	347-009-400 <b>2,-</b>	317-009-600 <b>15,-</b>	338-090-200 <b>19,-</b>	962-359 <b>30,-</b>	

### Class E2 · Individual weights, compact shape or knob shape, polished stainless steel

Test weight material: stainless steel polished

J	Tol +/- mg	Individual weights, compact shape	Individual weights, knob shape	Plastic box		Aluminium pro box	tected	Wooden box		DAkkS cert	tificate
		KERN €	KERN €	KERN	€	KERN	€	KERN	€	KERN	€
1 g	0,03	316-01 <b>36,</b> -	317-01 <b>52,-</b>	317-020-400	1,-	317-010-600	14,-	317-010-100	26,-	962-331	30,-
2 g	0,04	316-02 <b>36,-</b>	317-02 <b>53,-</b>	317-020-400	1,-	317-020-600	14,-	317-020-100	26,-	962-332	30,-
5 g	0,05	316-03 <b>37,</b> -	317-03 <b>56,-</b>	317-030-400	1,-	317-030-600	14,-	317-030-100	26,-	962-333	30,-
10 g	0,06	316-04 <b>38,</b> -	317-04 <b>60,-</b>	317-040-400	1,-	317-040-600	14,-	317-040-100	26,-	962-334	30,-
20 g	0,08	316-05 <b>43,</b> -	317-05 <b>68,-</b>	317-050-400	1,-	317-050-600	14,-	317-050-100	26,-	962-335	30,-
50 g	0,10	316-06 <b>46,</b> -	317-06 <b>73,-</b>	317-060-400 <b>5,</b> 2	20	317-060-600	14,-	317-060-100	28,-	962-336	30,-
100 g	0,16	316-07 <b>51,</b> -	317-07 <b>80,-</b>	317-070-400 <b>5</b> ,2	20	317-070-600	14,-	317-070-100	30,-	962-337	38,-
200 g	0,30	316-08 <b>62,</b> -	317-08 <b>101,-</b>	317-080-400	5,-	317-080-600	14,-	317-080-100	30,-	962-338	38,-
500 g	0,80	316-09 <b>93,</b> -	317-09 <b>168,-</b>	317-090-400 <b>7,</b> 4	10	317-090-600	15,-	317-090-100	32,-	962-339	38,-
1 kg	1,60	316-11 <b>135,</b> -	317-11 <b>245,-</b>	317-110-400	9,-	317-110-600	22,-	317-110-100	52,-	962-341	38,-
2 kg	3,00	316-12 <b>230,</b> -	317-12 <b>380,-</b>	317-120-400 <b>1</b>	2,-	317-120-600	26,-	317-120-100	59,-	962-342	47,-
5 kg	8,00	316-13 <b>360,</b> -	317-13 <b>550,-</b>	317-130-400 <b>2</b>	3,-	317-130-600	45,-	317-130-100	86,-	962-343	47,-
10 kg	16,00	316-14 <b>530,</b> -	317-14 <b>800,-</b>	317-140-400 <b>2</b>	3,-	317-140-600	63,-	317-140-100	104,-	962-344	47,-
20 kg	30,00		317-15 <b>2280,-</b>	-	-	317-150-600	110,-	317-150-100	580,-	962-345	61,-
50 kg	80,00		317-16 <b>4730,-</b>	-	-	317-160-600	240,-	317-160-100	690,-	962-346	70,-

### Class E2 · Weight sets, compact shape or knob shape, polished stainless steel

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

Weight sets	Compact shap in plastic case		Knob sha in plastic		Knob sha protected	pe in aluminium case	Knob sha in woode	n case	DAkkS cer	tificate
	KERN	€	KERN	€	KERN	€	KERN	ſ <b>∭</b> J €	KERN	€
1 mg - 500 mg	318-22	325,-	-	-	318-226	380,-			962-350	210,-
1 mg - 50 g	-	-	313-024	840,-	313-026	850,-	313-02	880,-	962-301	345,-
1 mg - 100 g	-	-	313-034	910,-	313-036	920,-	313-03	960,-	962-302	375,-
1 mg - 200 g	-	-	313-044	1110,-	313-046	1130,-	313-04	1160,-	962-303	435,-
1 mg - 500 g	-	-	313-054	1230,-	313-056	1250,-	313-05	1340,-	962-304	460,-
1 mg - 1 kg	-	-	313-064	1520,-	313-066	1540,-	313-06	1600,-	962-305	495,-
1 mg - 2 kg	-	-	313-074	2330,-	313-076	2350,-	313-07	2410,-	962-306	540,-
1 mg - 5 kg	-	-	313-084	2880,-	313-086	2900,-	313-08	3060,-	962-307	580,-
1 mg - 10 kg	-	-	-	-	313-096	3800,-	313-09	3950,-	962-308	620,-
1 g - 50 g	312-024	390,-	314-024	550,-	314-026	570,-	314-02	590,-	962-315	142,-
1 g - 100 g	312-034	445,-	314-034	620,-	314-036	640,-	314-03	670,-	962-316	170,-
1 g - 200 g	312-044	560,-	314-044	790,-	314-046	810,-	314-04	860,-	962-317	225,-
1 g - 500 g	312-054	650,-	314-054	970,-	314-056	990,-	314-05	1050,-	962-318	255,-
1 g - 1 kg	312-064	880,-	314-064	1230,-	314-066	1250,-	314-06	1310,-	962-319	285,-
1 g - 2 kg	312-074	1220,-	314-074	2050,-	314-076	2070,-	314-07	2130,-	962-320	350,-
1 g - 5 kg	312-084	1560,-	314-084	2600,-	314-086	2620,-	314-08	2780,-	962-321	395,-
1 g -10 kg	-	-	-	-	314-096	3490,-	314-09	3670,-	962-322	430,-



Note

Our highly-accurate OIML test weights are also available as **Premium<sup>+</sup> weights** for that extra level of safety. See all details page 176 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



≥ 500 g

Plastic box, lined, for individual weights ≤ 200 g



Plastic box, lined, for individual weights



Aluminium protected box, lined, for individual weights



Wooden box, lined, for individual weights  $\leq$  500 g



Wooden box, lined, for individual weights ≥1 kg

\**'P**/



Milligram weight Milligram weight set in plastic box set in aluminium

(328-22)



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, stainless steel

Test weight material: stainless steel

J	Tol +/- mg	Milligram we flat polygona	• /			Aluminium protected box				DAkkS certificate	
		KERN	€	KERN	€	KERN 🗗	€	KERN .	€	KERN	€
1 mg	0,020	328-01	11,-	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-451	20,-
2 mg	0,020	328-02	11,-	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-452	20,-
5 mg	0,020	328-03	11,-	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-453	20,-
10 mg	0,025	328-04	11,-	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-454	20,-
20 mg	0,03	328-05	11,-	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-455	20,-
50 mg	0,04	328-06	11,-	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-456	20,-
100 mg	0,05	328-07	11,-	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-457	20,-
200 mg	0,06	328-08	11,-	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-458	20,-
500 mg	0,08	328-09	11,-	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-459	20,-

### Class F1 · Individual weights, ECO shape or knob shape, polished stainless steel

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 €	KERN €
1 g	0,10	326-01 <b>28,-</b>	327-01 <b>34,-</b>	347-030-400 <b>2,-</b>	317-010-600 <b>14,-</b>	317-010-100 <b>26,-</b>	962-431 <b>20,-</b>
2 g	0,12	326-02 <b>29,-</b>	327-02 <b>34,-</b>	347-030-400 <b>2,-</b>	317-020-600 <b>14,-</b>	317-020-100 <b>26,-</b>	962-432 <b>20,-</b>
5 g	0,16	326-03 <b>30,-</b>	327-03 <b>35,-</b>	347-030-400 <b>2,-</b>	317-030-600 <b>14,-</b>	317-030-100 <b>26,-</b>	962-433 <b>20,-</b>
10 g	0,20	326-04 <b>31,-</b>	327-04 <b>39,-</b>	347-050-400 <b>2,-</b>	317-040-600 <b>14,-</b>	317-040-100 <b>26,-</b>	962-434 <b>20,-</b>
20 g	0,25	326-05 <b>32,-</b>	327-05 <b>44,-</b>	347-050-400 <b>2,-</b>	317-050-600 <b>14,-</b>	317-050-100 <b>26,-</b>	962-435 <b>20,-</b>
50 g	0,30	326-06 <b>34,-</b>	327-06 <b>51,-</b>	347-070-400 <b>2,-</b>	317-060-600 <b>14,-</b>	317-060-100 <b>28,-</b>	962-436 <b>20,-</b>
100 g	0,50	326-07 <b>38,-</b>	327-07 <b>56,-</b>	347-070-400 <b>2,-</b>	317-070-600 <b>14,-</b>	317-070-100 <b>30,-</b>	962-437 <b>22,-</b>
200 g	1,00	326-08 <b>49,-</b>	327-08 <b>76,-</b>	347-080-400 <b>2,-</b>	317-080-600 <b>14,-</b>	317-080-100 <b>30,-</b>	962-438 <b>22,-</b>
500 g	2,50	326-09 <b>79,-</b>	327-09 <b>121,-</b>	347-090-400 <b>3,-</b>	317-090-600 <b>15,-</b>	317-090-100 <b>32,-</b>	962-439 <b>22,-</b>
1 kg	5,00	326-11 <b>104,-</b>	327-11 <b>154,-</b>	347-110-400 <b>3,10</b>	317-110-600 <b>22,-</b>	317-110-100 <b>52,-</b>	962-441 <b>22,-</b>
2 kg	10	326-12 <b>179,-</b>	327-12 <b>240,-</b>	347-120-400 <b>4,-</b>	317-120-600 <b>26,-</b>	317-120-100 <b>59,-</b>	962-442 <b>28,-</b>
5 kg	25	326-13 <b>260,-</b>	327-13 <b>355,-</b>	347-130-400 <b>9,10</b>	317-130-600 <b>45,-</b>	317-130-100 <b>86,-</b>	962-443 <b>28,-</b>
10 kg	50	326-14 <b>485,-</b>	327-14 <b>650,-</b>	347-140-400 <b>12,-</b>	317-140-600 <b>63,-</b>	317-140-100 <b>104,-</b>	962-444 <b>28,-</b>
20 kg	100		327-15 <b>1790,-</b>		317-150-600 <b>110,-</b>	317-150-100 <b>580,-</b>	962-445 <b>31,-</b>
50 kg	250		327-16 <b>3850,-</b>		317-160-600 <b>240,-</b>	317-160-100 <b>690,-</b>	962-446 <b>43,-</b>

### Class F1 · Block weights, stainless steel polished

Block weight material: stainless steel polished

Weight	Tol +/- mg	stainless steel		Aluminium protected case		DAkkS certificate	
		KERN	€	KERN	€	KERN	€
5 kg	25	326-36	910,-	346-060-600	80,-	962-443	28,-
10 kg	50	326-37	1310,-	346-070-600	100,-	962-444	28,-
20 kg	100	326-38	1730,-	346-080-600	130,-	962-445	31,-
50 kg	250	326-39	4290,-	346-090-600	180,-	962-446	43,-

### Class F1 · Test weights, stainless steel polished, stackable

Test weight material: stainless steel polished

	Weight	Tol +/- mg	Test weight, stainless steel		Wooden case		DAkkS cer	tificate
,			KERN	€	KERN	€	KERN	€
	10 kg	50	327-141	1220,-	337-141-100	340,-	962-444	28,-
	20 kg	100	327-151	1570,-	337-151-100	370,-	962-445	31,-
	50 kg	250	327-161	3700,-	337-161-100	570,-	962-446	43,-

### Class F1 · Weight sets, ECO shape, polished stainless steel

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

Weight sets	ECO shape in plastic case	ECO shape protected	e in aluminium case	ECO shape in wooden	case	DAkkS cer	tificate
	KERN	€ KERN	€	KERN	€	KERN	€
1 mg - 500 mg	328-22 <b>184</b>	,- 328-226	215,-			962-450	110,-
1 mg - 50 g	325-024 <b>485</b>	,- 325-026	505,-	325-022	530,-	962-401	184,-
1 mg - 100 g	325-034 <b>520</b>	,- 325-036	540,-	325-032	570,-	962-402	196,-
1 mg - 200 g	325-044 <b>600</b>	,- 325-046	620,-	325-042	650,-	962-403	220,-
1 mg - 500 g	325-054 <b>680</b>	,- 325-056	700,-	325-052	800,-	962-404	230,-
1 mg - 1 kg	325-064 <b>870</b>	,- 325-066	880,-	325-062	900,-	962-405	240,-
1 mg - 2 kg	325-074 <b>1120</b>	,- 325-076	1140,-	325-072	1190,-	962-406	275,-
1 mg - 5 kg	325-084 <b>1360</b>	,- 325-086	1400,-	325-082	1530,-	962-407	290,-
1 mg - 10 kg	-	- 325-096	2050,-	325-092	2030,-	962-408	315,-
1 g - 50 g	326-024 <b>325</b>	,- 326-026	340,-	326-022	380,-	962-415	74,-
1 g - 100 g	326-034 <b>360</b>	,- 326-036	380,-	326-032	420,-	962-416	85,-
1 g - 200 g	326-044 <b>455</b>	,- 326-046	470,-	326-042	520,-	962-417	108,-
1 g - 500 g	326-054 <b>520</b>	,- 326-056	540,-	326-052	650,-	962-418	120,-
1 g - 1 kg	326-064 710	,- 326-066	730,-	326-062	760,-	962-419	131,-
1 g - 2 kg	326-074 <b>950</b>	,- 326-076	970,-	326-072	1050,-	962-420	166,-
1 g - 5 kg	326-084 <b>1200</b>	,- 326-086	1220,-	326-082	1400,-	962-421	183,-
1 g - 10 kg	-	- 326-096	1790,-	326-092	1890,-	962-422	200,-

### Class F1 · Weight sets, knob shape, polished stainless steel

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

Weight sets	Knob shape in plastic case	Knob shape in aluminiu protected case	m Knob shape in wooden case	DAkkS cer	tificate
	KERN		€ KERN	€ KERN	€
1 mg - 500 mg	328-22 <b>184</b>	- 328-226 <b>21</b>	5,-	962-450	110,-
1 mg - 50 g	323-024 560		/	/	184,-
1 mg - 100 g	323-034 610	- 323-036 <b>63</b>	<b>0,-</b> 323-03 <b>640</b>	<b>,-</b> 962-402	196,-
1 mg - 200 g	323-044 <b>760</b>	- 323-046 <b>78</b>	<b>0,-</b> 323-04 <b>810</b>	<b>,-</b> 962-403	220,-
1 mg - 500 g	323-054 <b>890</b>	- 323-056 <b>91</b>	<b>0,-</b> 323-05 <b>1000</b>	<b>,-</b> 962-404	230,-
1 mg - 1 kg	323-064 1140	- 323-066 116	<b>0,-</b> 323-06 <b>1170</b>	,- 962-405	240,-
1 mg - 2 kg	323-074 <b>1510</b>	- 323-076 <b>153</b>	<b>0,-</b> 323-07 <b>1590</b>	<b>,-</b> 962-406	275,-
1 mg - 5 kg	323-084 <b>1840</b>	- 323-086 <b>187</b>	<b>0,-</b> 323-08 <b>2010</b>	<b>,-</b> 962-407	290,-
1 mg - 10 kg	-	- 323-096 <b>265</b>	<b>0,-</b> 323-09 <b>2750</b>	<b>,-</b> 962-408	315,-
1 g - 50 g	324-024 <b>395</b>	- 324-026 40	<b>5,-</b> 324-02 <b>445</b>	<b>-</b> 962-415	74,-
1 g - 100 g	324-034 <b>450</b>	- 324-036 <b>47</b>	<b>0,-</b> 324-03 <b>510</b>	,- 962-416	85,-
1 g - 200 g	324-044 600	- 324-046 62	<b>0,-</b> 324-04 <b>670</b>	,- 962-417	108,-
1 g - 500 g	324-054 <b>720</b>	- 325-092 74	<b>0,-</b> 324-05 <b>860</b>	,- 962-418	120,-
1 g - 1 kg	324-064 <b>970</b>	- 324-066 <b>99</b>	<b>0,-</b> 324-06 <b>1020</b>	<b>,-</b> 962-419	131,-
1 g - 2 kg	324-074 1350	- 324-076 137	<b>0,-</b> 324-07 <b>1450</b>	,- 962-420	166,-
1 g - 5 kg	324-084 <b>1680</b>	- 324-086 <b>176</b>	<b>0,-</b> 324-08 <b>1870</b>	<b>,-</b> 962-421	183,-
1 g - 10 kg	-	- 324-096 251	<b>0,-</b> 324-09 <b>2600</b>	,- 962-422	200,-

## **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



≥ 500 g

lined, for individual weights



Aluminium protected box, lined, for individual weights



Wooden box, not lined for individual weights  $\leq$  500 g



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

(*†* 





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



Milligram weight Milligram weight Plastic case, lined, for weight sets, knob shape



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



Wooden case, for weight sets, knob shape

(338-22)

### Class F2 · Milligram weights, flat polygonal sheet, stainless steel

Test weight material: stainless steel

0	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 <b>9,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-451	20,-
2 mg	0,06	338-02 <b>9,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-452	20,-
5 mg	0,06	338-03 <b>9,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-453	20,-
10 mg	0,08	338-04 <b>9,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-454	20,-
20 mg	0,10	338-05 <b>9,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-455	20,-
50 mg	0,12	338-06 <b>9,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-456	20,-
100 mg	0,16	338-07 <b>9,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-457	20,-
200 mg	0,20	338-08 <b>9,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-458	20,-
500 mg	0,25	338-09 <b>9,-</b>	347-009-400	2,-	317-009-600	15,-	338-090-200	19,-	962-459	20,-

### Class F2 · Individual weights, knob shape, finely turned stainless steel

Test weight material: finely turned polished

Weight	Tol +/- mg	Individual weight, knob shape	Plastic box	Aluminium protected	Wooden box	DAkkS certificate	
		KERN €	KERN	63	KERN €	KERN €	
1 g	0,3	337-01 <b>19,-</b>	347-030-400 <b>2</b> ,	- 317-010-600 <b>14,-</b>	337-010-200 <b>18,-</b>	962-431 <b>20,-</b>	
2 g	0,4	337-02 <b>20,-</b>	347-030-400 <b>2</b> ,	- 317-020-600 <b>14,-</b>	337-020-200 17,-	962-432 <b>20,-</b>	
5 g	0,5	337-03 <b>21,</b> -	347-030-400 <b>2</b> ,	- 317-030-600 <b>14,-</b>	337-030-200 <b>18,-</b>	962-433 <b>20,</b> -	
10 g	0,6	337-04 <b>23,-</b>	347-050-400 <b>2</b> ,	- 317-040-600 <b>14,-</b>	337-040-200 <b>18,-</b>	962-434 <b>20,</b> -	
20 g	0,8	337-05 <b>25,-</b>	347-050-400 <b>2</b> ,	- 317-050-600 <b>14,-</b>	337-050-200 <b>18,-</b>	962-435 <b>20,</b> -	
50 g	1,0	337-06 <b>27,-</b>	347-070-400 <b>2</b> ,	- 317-060-600 <b>14,-</b>	337-060-200 <b>18,-</b>	962-436 <b>20,</b> -	
100 g	1,6	337-07 <b>30,-</b>	347-070-400 <b>2</b> ,	- 317-070-600 <b>14,-</b>	337-070-200 <b>20,-</b>	962-437 <b>22,</b>	
200 g	3,0	337-08 <b>40,-</b>	347-080-400 <b>2</b> ,	- 317-080-600 <b>14,-</b>	337-080-200 <b>20,-</b>	962-438 <b>22,</b>	
500 g	8,0	337-09 <b>57,</b> -	347-090-400 <b>3</b> ,	- 317-090-600 <b>15,-</b>	337-090-200 <b>23,-</b>	962-439 <b>22,</b>	
1 kg	16	337-11 <b>80,-</b>	347-110-400 <b>3,10</b>	317-110-600 <b>22,-</b>	337-110-200 <b>36,-</b>	962-441 <b>22,</b>	
2 kg	30	337-12 <b>120,-</b>	347-120-400 <b>4</b> ,	- 317-120-600 <b>26,-</b>	337-120-200 <b>37,-</b>		
5 kg	80	337-13 <b>205,-</b>	347-130-400 <b>9,10</b>	317-130-600 <b>45,-</b>	337-130-200 <b>62,-</b>	962-443 <b>28,</b> -	
10 kg	160	337-14 <b>395,-</b>	347-140-400 <b>12</b> ,	- 317-140-600 <b>63,-</b>	337-140-200 <b>65,-</b>	962-444 <b>28</b> ,	
20 kg	300	337-15 <b>690,-</b>		317-150-600 110,-	337-150-200 <b>365,-</b>	962-445 <b>31</b> ,	
50 kg	800	337-16 <b>1240,-</b>		317-160-600 240,-	337-160-200 <b>590,-</b>	962-446 <b>43</b> ,-	

### Class F2 · Test weights, finely turned stainless steel

Test weight material: finely turned stainless steel

Weight Tol +/- mg		Test weight, stainless steel		Wooden box		DAkkS certificate		
		KERN	€	KERN	L I €	KERN	€	
10 kg	160	337-141	600,-	337-141-200	345,-	962-444	28,-	
20 kg	300	337-151	730,-	337-151-200	385,-	962-445	31,-	
50 kg	800	337-161	1970,-	337-161-200	570,-	962-446	43,-	

### Class F2 · Block weights, stainless steel glass bead blasted

Block weight material: stainless steel glass bead blasted

Weight	Tol +/- mg	Block weight, stainless steel		Aluminium p	rotected case	DAkkS certificate	
		KERN	€	KERN	€	KERN	€
5 kg	80	336-36	510,-	346-060-600	80,-	962-443	28,-
10 kg	160	336-37	680,-	346-070-600	100,-	962-444	28,-
20 kg	300	336-38	860,-	346-080-600	130,-	962-445	31,-
50 kg	800	336-39	2280,-	346-090-600	180,-	962-446	43,-

### Class F2 · Weight sets, knob shape, finely turned stainless steel

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

Weight	Knob shape in plastic case	Knob sha protected	ape in aluminium d 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 <b>345</b>	/	365,-		370,-		184,-
1 mg - 100 g	333-034 <b>385</b>	,- 333-036	400,-	333-03	405,-	962-402	196,-
1 mg - 200 g	333-044 <b>450</b>	,- 333-046	465,-	333-04	470,-	962-403	220,-
1 mg - 500 g	333-054 <b>510</b>	,- 333-056	530,-	333-05	540,-	962-404	230,-
1 mg - 1 kg	333-064 <b>630</b>	,- 333-066	650,-	333-06	660,-	962-405	240,-
1 mg - 2 kg	333-074 <b>890</b>	,- 333-076	910,-	333-07	920,-	962-406	275,-
1 mg - 5 kg	333-084 1150	,- 333-086	1180,-	333-08	1190,-	962-407	290,-
1 mg - 10 kg	-	- 333-096	1640,-	333-09	1650,-	962-408	315,-
1 g - 50 g	334-024 220	,- 334-026	235,-	334-02	240,-	962-415	74,-
1 g - 100 g	334-034 <b>260</b>	- 334-036	270,-	334-03	275,-	962-416	85,-
1 g - 200 g	334-044 345	- 334-046	365,-	334-04	370,-	962-417	108,-
1 g - 500 g	334-054 <b>410</b>	- 334-056	425,-	334-05	430,-	962-418	120,-
1 g - 1 kg	334-064 <b>520</b>	,- 334-066	530,-	334-06	540,-	962-419	131,-
1 g - 2 kg	334-074 <b>760</b>	,- 334-076	800,-	334-07	810,-	962-420	166,-
1 g - 5 kg	334-084 990	- 334-086	1060,-	334-08	1070,-	962-421	183,-
1 g -10 kg	-	- 334-096	1520,-	334-09	1530,-	962-422	200,-

# 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

4



Slotted weights, finely turned stainless steel



Plastic box, for individual weights  $\leq$  200 g, for hook weights and slotted weights  $\leq 50$  g



Plastic box, lined, for individual weights  $\geq$  500 g, for hook weights and slotted weights  $\geq$  100 g



Aluminium protected box, lined, for individual weights

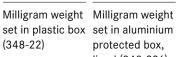


Wooden box, not lined, for individual weights  $\leq$  500 g



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





protected box, lined (348-226)



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



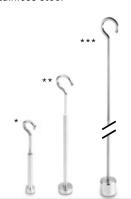
Aluminium protected case, lined, for weight sets, knob shape, finely turned stainless steel



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 194



-0-

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

### Class M1 · Milligram weights, flat polygonal sheet, stainless steel

Test weight material: stainless steel

Weight	Tol +/- mg	Milligram weight flat polygonal sh	7	Plastic box		Aluminium protected box					DAkkS certificate		
		KERN	€	KERN	€	KERN	•	€	KERN	<u>, 7</u> 47,	€	KERN	€
1 mg	0,20	348-01	4,40	347-009-400	2,-	317-009	-600	15,-	338-090	-200	19,-	962-651	16,-
2 mg	0,20	348-02	4,40	347-009-400	2,-	317-009	-600	15,-	338-090	-200	19,-	962-652	16,-
5 mg	0,20	348-03	4,40	347-009-400	2,-	317-009	-600	15,-	338-090	-200	19,-	962-653	16,-
10 mg	0,25	348-04	4,40	347-009-400	2,-	317-009	-600	15,-	338-090	-200	19,-	962-654	16,-
20 mg	0,30	348-05	4,40	347-009-400	2,-	317-009	-600	15,-	338-090	-200	19,-	962-655	16,-
50 mg	0,40	348-06	4,40	347-009-400	2,-	317-009	-600	15,-	338-090	-200	19,-	962-656	16,-
100 mg	0,50	348-07	4,40	347-009-400	2,-	317-009	-600	15,-	338-090	-200	19,-	962-657	16,-
200 mg	0,60	348-08	4,40	347-009-400	2,-	317-009	-600	15,-	338-090	-200	19,-	962-658	16,-
500 mg	0,80	348-09	4,40	347-009-400	2,-	317-009	-600	15,-	338-090	-200	19,-	962-659	16,-

### Class M1 · Individual weights, knob shape, stainless steel

Test weights material: stainless steel

Weight	Tol +/- mg	Individual weigh stainless steel	ht,	Plastic box			Aluminium protected box		Wooden box		DAkkS certificate	
		KERN	€	KERN	€	KERN	₽ €	KERN		€	KERN	€
1 g	1,0	347-01	7,70	347-030-400	2,-	317-010-6	00 <b>14,-</b>	337-01	0-200	18,-	962-631	16,-
2 g	1,2	347-02	7,70	347-030-400	2,-	317-020-6	00 14,-	337-02	0-200	17,-	962-632	16,-
5 g	1,6	347-03	7,80	347-030-400	2,-	317-030-6	00 14,-	337-03	0-200	18,-	962-633	16,-
10 g	2,0	347-04	8,20	347-050-400	2,-	317-040-6	00 14,-	337-04	0-200	18,-	962-634	16,-
20 g	2,5	347-05	12,-	347-050-400	2,-	317-050-6	00 14,-	337-05	0-200	18,-	962-635	16,-
50 g	3,0	347-06	13,-	347-070-400	2,-	317-060-6	00 14,-	337-06	0-200	18,-	962-636	16,-
100 g	5,0	347-07	16,-	347-070-400	2,-	317-070-6	00 14,-	337-07	0-200	20,-	962-637	18,-
200 g	10	347-08	19,-	347-080-400	2,-	317-080-6	00 14,-	337-08	0-200	20,-	962-638	18,-
500 g	25	347-09	30,-	347-090-400	3,-	317-090-6	00 15,-	337-09	0-200	23,-	962-639	18,-
1 kg	50	347-11	45,-	347-110-400	3,10	317-110-6	00 22,-	337-11	0-200	36,-	962-641	18,-
2 kg	100	347-12	82,-	347-120-400	4,-	317-120-6	00 26,-	337-12	0-200	37,-	962-642	19,-
5 kg	250	347-13	180,-	347-130-400	9,10	317-130-6	00 <b>45,</b> -	337-13	0-200	62,-	962-643	19,-
10 kg	500	347-14	350,-	347-140-400	12,-	317-140-6	00 <b>63,</b> -	337-14	0-200	65,-	962-644	19,-

### Class M1 · Block weights, lacquered cast iron or stainless steel glass bead blasted

Block weight material: cast iron or stainless steel, surface and edges refined

Weight	Tol +/- g	<b>,</b>		Block weight, A stainless steel		Aluminium protected	DAkkS certificate		
		KERN	€	KERN	€	KERN	€	KERN	€
5 kg	0,25	346-86	54,-	346-06	380,-	346-060-600	80,-	962-643	19,-
10 kg	0,50	346-87 <b>1</b> 1	11,-	346-07	510,-	346-070-600	100,-	962-644	19,-
20 kg	1,00	346-88 20	)5,-	346-08	680,-	346-080-600	130,-	962-645	24,-
50 kg	2,50	346-89 50	00,-	346-09	1820,-	346-090-600	180,-	962-646	26,-

### Class M1 · ECO Block weights, lacquered cast iron

ECO Block weight material: cast iron, surface and edges machined

Weight	Tol +/- g	ECO Block weight, cast iron		Aluminium protected	DAkkS certificate		
		KERN	€	KERN	€	KERN	€
5 kg	0,25	346-76	51,-	346-060-600	80,-	962-643	19,-
10 kg	0,50	346-77	86,-	346-070-600	100,-	962-644	19,-
20 kg	1,00	346-78	157,-	346-080-600	130,-	962-645	24,-
50 kg	2,50	346-79	380,-	346-090-600	180,-	962-646	26,-

### Class M1 · Test weights, stainless steel, stackable

Test weight material: finely turned stainless steel

Weight	Tol +/- g	Test weight, stainless steel		Wooden box		DAkkS ce	rtificate
		KERN	€	KERN	747	€ KERN	€
10 kg	0,5	347-141	600,-	337-141-200	345	,- 962-644	19,-
20 kg	1,0	347-151	740,-	337-151-200	385	,- 962-645	24,-
50 kg	2,5	347-161	1970,-	337-161-200	570	,- 962-646	26,-

### Class M1 · Heavy duty weights, lacquered cast iron, stackable

Heavy duty weight material: 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, cast iron		DAkkS certi	ficate
		KERN	€	KERN	€
100 kg	5	346-81	2070,-	962-691	69,-
200 kg	10	346-82	2730,-	962-692	69,-
500 kg	25	346-83	4970,-	962-693	69,-
1000 kg	50	346-84	8610,-	962-694	150,-
2000 kg	100	346-85	16140,-	962-695	275,-

### Note

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

### Class M1 · Weight sets, knob shape, stainless steel

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

Weight Knob shape, finely turned stainle in plastic case		s steel,	Knob shape, steel, finely turned stainless stee in wooden case		Knob shape, teel, finely turned stainless in aluminium protected		DAkkS cer	AkkS certificate	
	KERN	€	KERN	€	KERN		KERN	€	
1 mg - 500 mg	348-22	85,-	-	-	348-226	142,-	962-650	63,-	
1 mg – 50 g	343-024	235,-	343-02	215,-	343-026	215,-	962-601	117,-	
1 mg - 100 g	343-034	250,-	343-03	240,-	343-036	230,-	962-602	123,-	
1 mg - 200 g	343-044	290,-	343-04	280,-	343-046	270,-	962-603	138,-	
1 mg - 500 g	343-054	315,-	343-05	310,-	343-056	300,-	962-604	144,-	
1 mg – 1 kg	343-064	475,-	343-06	445,-	343-066	380,-	962-605	151,-	
1 mg – 2 kg	343-074	630,-	343-07	620,-	343-076	570,-	962-606	167,-	
1 mg – 5 kg	343-084	790,-	343-08	840,-	343-086	770,-	962-607	176,-	
1 mg - 10 kg	-	-	343-09	1160,-	343-096	1110,-	962-608	184,-	
1 g - 50 g	344-024	158,-	344-02	128,-	344-026	151,-	962-615	46,-	
1 g - 100 g	344-034	174,-	344-03	151,-	344-036	167,-	962-616	54,-	
1 g - 200 g	344-044	210,-	344-04	197,-	344-046	205,-	962-617	67,-	
1 g – 500 g	344-054	240,-	344-05	235,-	344-056	235,-	962-618	75,-	
1 g - 1 kg	344-064	400,-	344-06	350,-	344-066	315,-	962-619	81,-	
1 g – 2 kg	344-074	550,-	344-07	530,-	344-076	500,-	962-620	98,-	
1 g – 5 kg	344-084	710,-	344-08	740,-	344-086	710,-	962-621	106,-	
1 g - 10 kg	-	-	344-09	1060,-	344-096	1050,-	962-622	114,-	

### Class M1 · Hook weights, finely turned stainless steel

Hook weight material: finely turned stainless steel

Weight	Tol +/- mg	Hook weight, stainless steel		Plastic box, linned		DAkkS certificate	
		KERN	€	KERN	€	KERN	€
1 g	1,0	347-016	22,-	347-030-400	2,-	962-631	16,-
2 g	1,2	347-026	22,-	347-030-400	2,-	962-632	16,-
5 g	1,6	347-036	22,-	347-030-400	2,-	962-633	16,-
10 g	2,0	347-046	22,-	347-050-400	2,-	962-634	16,-
20 g	2,5	347-056	24,-	347-050-400	2,-	962-635	16,-
50 g	3,0	347-066	30,-	347-070-400	2,-	962-636	16,-
100 g	5,0	347-076	31,-	347-090-400	3,-	962-637	18,-
200 g	10,0	347-086	35,-	347-090-400	3,-	962-638	18,-
500 g	25,0	347-096	64,-	347-110-400	3,10	962-639	18,-
1 kg	50,0	347-116	82,-	347-120-400	4,-	962-641	18,-
2 kg	100,0	347-126	132,-	347-130-400	9,10	962-642	19,-
5 kg	250,0	347-136	250,-	347-140-400	12,-	962-643	19,-
10 kg	500,0	347-146	390,-	-	-	962-644	19,-

### Class M1 · Slotted weights, finely turned stainless steel

Slotted weight material: finely turned stainless steel

Weight	Tol +/- mg	Slotted weight, stainless steel		Plastic box, lined		DAkkS cert	ificate
		KERN	€	KERN	€	KERN	€
1 g	1,0	347-015	22,-	347-030-400	2,-	962-631	16,-
2 g	1,2	347-025	20,-	347-030-400	2,-	962-632	16,-
5 g	1,6	347-035	22,-	347-030-400	2,-	962-633	16,-
10 g	2,0	347-045	23,-	347-030-400	2,-	962-634	16,-
20 g	2,5	347-055	24,-	347-080-400	2,-	962-635	16,-
50 g	3,0	347-065	26,-	347-080-400	2,-	962-636	16,-
100 g	5,0	347-075	28,-	347-090-400	3,-	962-637	18,-
200 g	10	347-085	38,-	347-090-400	3,-	962-638	18,-
500 g	25	347-095	58,-	347-110-400	3,10	962-639	18,-
1 kg	50	347-115	98,-	347-130-400	9,10	962-641	18,-
2 kg	100	347-125	146,-	347-130-400	9,10	962-642	19,-
5 kg	250	347-135	230,-	347-140-400	12,-	962-643	19,-
10 kg	500	347-145	425,-	347-140-400	12,-	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 <sup>(1)</sup>	Largest slotted weight possible	Material	Length				
					KERN	€	KERN	€
10 g	200 g	100 g	Aluminium	117,5	347-445-100*	32,-	962-634	16,-
100 g	2 kg	1 kg	Stainless steel	238	347-075-100**	53,-	962-637	18,-
500 g	20 kg	10 kg	Stainless steel	639	347-095-100***	77,-	962-639	18,-
1 kg	40 kg	10 kg	Stainless steel	1020	347-115-100***	115,-	962-641	18,-

<sup>(1)</sup> 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 191

### 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, I 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, finely turned stainless steel

Test weight material: finely turned stainless steel

Weight	Tol +/- mg	Individual weight, knob shape	Plastic box, lined		Aluminium p box	orotected	Wooden b	ox	DAkkS cer	rtificate
		KERN	E KERN	€	KERN 🖻	] €	KERN	€	KERN	€
1 g	3	357-01 <b>4,0</b>	<b>0</b> 347-030-400	2,-	317-010-600	14,-	337-010-2	00 <b>18,-</b>	962-631	16,-
2 g	4	357-02 <b>4,0</b>	<b>0</b> 347-030-400	2,-	317-020-600	14,-	337-020-2	00 <b>17,</b> -	962-632	16,-
5 g	5	357-03 <b>4,1</b>	<b>0</b> 347-030-400	2,-	317-030-600	14,-	337-030-2	00 <b>18,-</b>	962-633	16,-
10 g	6	357-04 <b>4,4</b>	<b>0</b> 347-050-400	2,-	317-040-600	14,-	337-040-2	00 <b>18,-</b>	962-634	16,-
20 g	8	357-05 <b>8,0</b>	<b>0</b> 347-050-400	2,-	317-050-600	14,-	337-050-2	00 <b>18,-</b>	962-635	16,-
50 g		357-06 <b>9,4</b>	<b>0</b> 347-070-400	2,-	317-060-600	14,-	337-060-2	00 <b>18,-</b>	962-636	16,-
100 g		357-07 <b>12</b>	- 347-070-400	2,-	317-070-600	14,-	337-070-2	00 <b>20,-</b>	962-637	18,-
200 g	30	357-08 <b>17</b>	- 347-080-400	2,-	317-080-600	14,-	337-080-2	00 <b>20,-</b>	962-638	18,-
500 g	80	357-09 <b>31</b>	- 347-090-400	3,-	317-090-600	15,-	337-090-2	00 <b>23,-</b>	962-639	18,-
1 kg	160	357-11 <b>46</b>	- 347-110-400	3,10	317-110-600	22,-	337-110-2	00 <b>36,-</b>	962-641	18,-
2 kg	300	357-12 <b>84</b>	- 347-120-400	4,-	317-120-600	26,-	337-120-2	00 <b>37,-</b>	962-642	19,-
5 kg	800	357-13 <b>183</b>	- 347-130-400	9,10	317-130-600	45,-	337-130-2	00 <b>62,-</b>	962-643	19,-
10 kg	1600	357-14 <b>360</b>	<b>-</b> 347-140-400	12,-	317-140-600	63,-	337-140-2	00 <b>65,-</b>	962-644	19,-

### Class M2 · Block weights, lacquered cast iron

Block weight material: cast iron, surface and edges refined

Weight	Tol +/- g	Block weight, cast iron		Aluminium protected box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€
5 kg	0,8	356-86	64,-	346-060-600	80,-	962-643	19,-
10 kg	1,6	356-87	111,-	346-070-600	100,-	962-644	19,-
20 kg	3,0	356-88	205,-	346-080-600	130,-	962-645	24,-
50 kg	8,0	356-89	500,-	346-090-600	180,-	962-646	26,-

### Class M2 · ECO Block weights, lacquered cast iron

ECO Block weight material: lacquered cast iron, surface and edges machined

Weight	Tol +/- g	ECO block weight, cast iron		Aluminium protecte	DAkkS certificate		
		KERN	€	KERN	€	KERN	€
5 kg	0,8	356-76	51,-	346-060-600	80,-	962-643	19,-
10 kg	1,6	356-77	86,-	346-070-600	100,-	962-644	19,-
20 kg	3,0	356-78	157,-	346-080-600	130,-	962-645	24,-
50 kg	8,0	356-79	380,-	346-090-600	180,-	962-646	26,-

### Class M2 · Weight sets, knob shape, stainless steel

Test weight material: finely turned stainless steel

Weight	Knob shape in aluminiur	• /		Knob shape, in wooden case			DAkkS certificate	
	KERN	€	KERN		€	KERN	€	
1 g - 50 g	354-026	117,-	354-02		93,-	962-615	46,-	
1 g - 100 g	g 354-036	128,-	354-03		113,-	962-616	54,-	
1 g - 200 g	g 354-046	162,-	354-04		153,-	962-617	67,-	
1 g - 500 g	g 354-056	194,-	354-05		198,-	962-618	75,-	
1 g – 1 kg	354-066	275,-	354-06		315,-	962-619	81,-	
1 g – 2 kg	354-076	480,-	354-07		495,-	962-620	98,-	
1 g - 5 kg	354-086	710,-	354-08		730,-	962-621	106,-	
1 g - 10 kg	354-096	1140,-	354-09		1150	962-622	114,-	

### Class M3 · Individual weights, knob shape, stainless steel

Test weight material: finely turned stainless steel

Weight	Tol +/- mg	Individual weight, knob shape	Plastic box, lined		Aluminium protected box		Wooden box		DAkkS certificate	
		KERN €	KERN	€	KERN 🖻	€	KERN	€	KERN	€
1 g	10	367-01 <b>7,60</b>	347-030-400	2,-	317-010-600	14,-	337-010-200	18,-	962-631	16,-
2 g	12	367-02 <b>7,60</b>	347-030-400	2,-	317-020-600	14,-	337-020-200	17,-	962-632	16,-
5 g	16	367-03 <b>7,70</b>	347-030-400	2,-	317-030-600	14,-	337-030-200	18,-	962-633	16,-
10 g	20	367-04 <b>8,10</b>	347-050-400	2,-	317-040-600	14,-	337-040-200	18,-	962-634	16,-
20 g	25	367-05 11,	347-050-400	2,-	317-050-600	14,-	337-050-200	18,-	962-635	16,-
50 g	30	367-06 <b>12</b> ,	347-070-400	2,-	317-060-600	14,-	337-060-200	18,-	962-636	16,-
100 g	50	367-07 15,	347-070-400	2,-	317-070-600	14,-	337-070-200	20,-	962-637	18,-
200 g	100	367-08 <b>18</b> ,	347-080-400	2,-	317-080-600	14,-	337-080-200	20,-	962-638	18,-
500 g	250	367-09 <b>29</b> ,	347-090-400	3,-	317-090-600	15,-	337-090-200	23,-	962-639	18,-
1 kg	500	367-11 <b>44</b> ,	347-110-400	3,10	317-110-600	22,-	337-110-200	36,-	962-641	18,-
2 kg	1000	367-12 <b>81</b> ,	347-120-400	4,-	317-120-600	26,-	337-120-200	37,-	962-642	19,-

### Class M3 · Individual weights, knob and cylindrical shape, lacquered cast iron

Test weight	material.	cast iron	
iest weight	material.		

Weight	Tol +/- g	Individual we knob and cyl	ight, indrical shape	DAkkS certif	icate
		KERN	€	KERN	€
100 g*	0,05	366-91	22,-	962-637	18,-
200 g*	0,10	366-92	25,-	962-638	18,-
500 g**	0,25	366-93	32,-	962-639	18,-
1 kg**	0,50	366-94	40,-	962-641	18,-
2 kg**	1,0	366-95	67,-	962-642	19,-
5 kg**	2,5	366-96	123,-	962-643	19,-
10 kg**	5,0	366-97	215,-	962-644	19,-



### Class M3 · Block weights, lacquered cast iron

Block weight material: cast iron, surface and edges refined

Weight	Tol +/- g	Block weight, cast iron		Aluminium protected box		DAkkS certi	ficate
		KERN	€	KERN	€	KERN	€
5 kg	2,5	366-86	54,-	346-060-600	80,-	962-643	19,-
10 kg	5,0	366-87	90,-	346-070-600	100,-	962-644	19,-
20 kg	10	366-88	158,-	346-080-600	130,-	962-645	24,-
50 kg	25	366-89	395,-	346-090-600	180,-	962-646	26,-

### Class M3 · ECO Block weights, lacquered cast iron

ECO Block weight material: lacquered cast iron, surface and edges machined

Weight	Tol +/- g	ECO block weight, cast iron		Aluminium protected box		DAkkS certificate	
		KERN	€	KERN	€	KERN	€
5 kg	2,5	366-76	51,-	346-060-600	80,-	962-643	19,-
10 kg	5,0	366-77	86,-	346-070-600	100,-	962-644	19,-
20 kg	10	366-78	157,-	346-080-600	130,-	962-645	24,-
50 kg	25	366-79	380,-	346-090-600	180,-	962-646	26,-

### Class M3 · Weight sets, knob and cylindrical shape, stainless steel and lacquered cast iron

Test weight material:  $\leq$  50 g stainless steel,  $\geq$  100 g cast iron

Weight	Knob and cylindrical shape, in wooden block		DAkkS certificate	
	KERN	€	KERN	€
1 g - 1 kg	362-96	220,-	962-619	81,-
1 g – 2 kg	362-97	360,-	962-620	98,-
1 g – 5 kg	362-98	450,-	962-621	106,-
1 g - 10 kg	362-99	620,-	962-622	114,-



Individual weights ≤ 50 g



Individual weights 100 g and 200 g



≥ 500 g

Individual weights

### 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	Stainless steel with silicone-coated tips	315-243	14,-
E1 - M3	500 g – 2 kg	250 mm	Stainless steel with silicone-coated tips	315-245	50,-
E1 - M3	≤ 5 g	130 mm	Stainless steel, curved, high-quality plastic tips	315-246	22,-
E1 - M3	≤ 5 g	136 mm	Stainless steel, straight, high quality plastic tips	315-247	22,-
E1 - M3	≤ 200 g	225 mm	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	13,-
E1 – M3	1 mg – 200 g	100 mm	6 Plastic	315-242	6,20

Weight grip
plastic coated

for knob shaped weights	KERN	€
2 kg	315-273	30,-
5 kg	315-274	33,-
10 kg	315-275	38,-
20 kg	315-276	57,-
	weights 2 kg 5 kg 10 kg	





I 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.

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.

	KERN	€
3	317-281	9,-





**Dusting brush** to clean the weights

KERN	€
318-270	5,-



Bellows for cleaning weights

KEDN	c
KERN	E
318-271	7,-



Microfibre cloth for cleaning weights

KERN	€
318-272	3,50

### Boxes for individual weights





For weights  $\leq$  500 g, OIML class E1 - F1

Wooden box, lined

For weights

mg

1 g

2 g

5 g

10 g

20 g

50 g

100 g

200 g

500 g

1 kg

2 kg

5 kg

10 kg

20 kg

50 kg

4

for single weights E1 - F1

For weights  $\geq$  1 kg, OIML class E1 - F1

797

€

19,-

26,-

26,-

26,-

26,-

26,-

28,-

30,-

30,-

32,-

52,-

59,-

86,-

104,-

580,-

690,-

Case material: Wood, lined, suitable for single weights, KERN-Nr. 307, 316, 317, 326, 327

KERN

338-090-200

317-010-100

317-020-100

317-030-100

317-040-100

317-050-100

317-060-100

317-070-100

317-080-100

317-090-100

317-110-100

317-120-100

317-130-100

317-140-100

317-150-100

317-160-100



For weights  $\leq$  500 g, OIML class F2 - M3

Wooden box,

For weights

mg

1 g

2 g

5 g

10 g

20 g

50 g

100 g

200 g

500 g

1 kg

2 kg

5 kg

10 kg

20 kg

50 kg

þ

for single weights F2 - M3

Case material: Wood, not lined, suitable for

single weights, KERN-Nr. 337, 347, 357, 367

KERN

338-090-200

337-010-200

337-020-200

337-030-200

337-040-200

337-050-200

337-060-200

337-070-200

337-080-200

337-090-200

337-110-200

337-120-200

337-130-200

337-140-200

337-150-200

337-160-200

II not suitable for cast iron weights

For weights  $\geq$  1 kg,

OIML class F2 - M3

797

€ 19,-

18,-

17,-

18,-18,-

18,-

18,-

20,-

20,-

23,-

36,-

37,-

62,-

65,-

365,-

590,-



For test weights  $\geq$  10 kg, OIML class F1 – M1

Case material: Wood, lined/not lined, suitable for single weights, KERN-Nr. 327, 337, 347 not suitable for cast iron weights

### Wooden box, not lined

for test weights F1 - M1

For weights	KERN	<u>\</u> 4	€
10 kg	337-141-200		345,-
20 kg	337-151-200		385,-
50 kg	337-161-200		570,-

### Wooden box, lined

for test weights F1 - M1

1-100 <b>340,-</b>
51-100 <b>370,-</b>
51-100 <b>570,-</b>
5



For weights  $\leq$  5 kg, OIML class E1 – M3

Case material: Aluminium protected, lined, suitable for single weights, KERN-Nr. 307, 316, 317, 326, 327, 337, 347, 357, 367 not suitable for cast iron weights

#### Aluminium protected box, lined

for individual weights, knob and compact shape, class E1 - M3

For weights	KERN	6	€
Individual weight, mg	317-009-600		15,-
1 g	317-010-600		14,-
2 g	317-020-600		14,-
5 g	317-030-600		14,-
10 g	317-040-600		14,-
20 g	317-050-600		14,-
50 g	317-060-600		14,-
100 g	317-070-600		14,-
200 g	317-080-600		14,-
500 g	317-090-600		15,-
1 kg	317-110-600		22,-
2 kg	317-120-600		26,-
5 kg	317-130-600		45



For weights ≤ 10 kg, OIML class E1 – M3

Case material: Aluminium protected, lined, suitable for single weights, KERN-Nr. 307, 316, 317, 326, 327, 337, 347, 357, 367 not suitable for cast iron weights

#### Aluminium protected box, lined

for individual weights, knob and compact shape, class E1 - M3

For weights	KERN	 €
10 kg	317-140-600	63,-
20 kg	317-150-600	110,-
50 kg	317-160-600	240,-



For block weight  $\geq$  5 kg, OIML class F1 – M3

Case material: Aluminium protected, lined, suitable for block weights, KERN-Nr. 326, 336, 346, 356, 366

Aluminium protected case, lined for individual weights F1 - M3

For weights	KERN	€
5 kg	346-060-600	80,-
10 kg	346-070-600	100,-
20 kg	346-080-600	130,-
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: 1 × 50 g, 2 × 100 g, 1 × 500 g, 2 × 1 kg, 1 × 2 kg.

The correct individual box is  ${\bf KERN-Nr.~313-080-400}$  (plastic) or  ${\bf KERN-Nr.~315-070-100}$  (wood, not 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	135,-
≤5 kg	313-080-400	265,-



#### Wooden case

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

KERN	€
315-040-100	225,-
315-060-100	315,-
315-070-100	395,-
315-080-100	490,-
315-090-100	520,-
	KERN         X           315-040-100         315-060-100           315-070-100         315-070-100           315-080-100         315-080-100



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

Largest possible weight		€
≤ 200 g	335-040-200	119,-
≤ 500 g	335-050-200	119,-
≤ 1 kg	335-060-200	180,-
≤ 2 kg	335-070-200	210,-
≤ 5 kg*	335-080-200	280,-
≤ 10 kg*	335-090-200	310,-

Fig. shows 313-010-600

### 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	KFRN	€
≤ 500 g	313-052-400	74,-
≤ 5 kg	313-082-400	187,-



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

### Aluminium protected case

for weight sets with standard denomination classes E1 – M2  $^{\star1}$  front handle;  $^{\star2}$  side handles;  $^{\star\star*}$ no handle

For weights	For class	KERN	€
1 mg - 500 mg	E1 - M1	313-010-600*	75,-
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***	340,-
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 ***	335,-

## 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 classes 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 contain excluding weig	
				KERN	€
20 kg	1,0	5 × 20 kg	120 kg	346-022-005	1560,-
40 kg	1,5	8 × 20 kg	200 kg	346-042-008	2020,-
50 kg	2,5	10 × 20 kg	250 kg	346-052-010	2020,-
50 kg	2,5	4 × 50 kg	250 kg	346-055-004	2020,-
50 kg	2,5	9 × 50 kg	500 kg	346-055-009	2020,-
60 kg	3,0	8 × 50 kg and 2 × 20 kg	500 kg	346-065-009	2190,-



Weight of the weight container, OIML class M1	Tol +/- g	Possible equipment, test weights, OIML class M1	Maximum total weight (weight container incl. weights)		
				KERN	€
20 kg	1,0	max. 10 × 10 kg or 5 × 20 kg	120 kg	347-022-005	1560,-
40 kg	2,0	max. 16 × 10 kg or 8 × 20 kg	200 kg	347-042-008	1840,-
50 kg	2,5	max. 20 × 10 kg or 10 × 20 kg	250 kg	347-052-010	2020,-
60 kg	3,0	max. 22 × 20 kg	500 kg	347-062-022	2190,-



## 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:

9 block weights	each 50 kg, class M1 =	450 kg
1 weight container	each 50 kg, class M1 =	50 kg
Total	=	500 kg

Weight of the weight container, OIML class M1		
	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

## DAkkS Calibration Service/Verification service

### The DAkkS (German accreditation body)

The DAkkS is the national accreditation body of the Federal Republic of Germany. According to Regulation (EC) No. 765/2008 and the Accreditation Body Act (AkkStelleG), the DAkkS acts in the public interest as the sole service provider for accreditation in Germany.

In order to be able to fulfil its sovereign accreditation tasks, the DAkkS was entrusted by the Federal Government. As an entrusted body, the DAkkS is subject to federal supervision.

Only an accredited calibration laboratory can issue a DAkkS calibration certificate. This defines not only the measuring method as well as the measuring result, but also gives information on tracing the test medium to national standards and the relevant uncertainty of measurement.

You are certified to ...

ISO 9001, QS 9000, GLP, GMP, TS16949

> You need ... to control your measuring equipment

Our solution ...

 DAkkS calibration certificate; (traceability, measuring uncertainty, internationally recognised)

### KERN – Precision is our business

The KERN calibration laboratory for electronic balances and weights has been accredited by DKD since 1994 and today is one of the most modern and best-equipped DKD calibration laboratories for balances, test weights and force measurement in Europe.

Thanks to the high level of automation, we can carry out DAkkS calibration of balances, test weights and force-measuring devices 24 hours a day, 7 days a week.

Do you have any further requests or questions on this matter? We would be pleased to help you or visit us on the web at **www.kern-lab.com** 

### **DAkkS** calibration

- Why? DAkkS calibration is always necessary when checking equipment (balance or test weight) is to be used in a QM process (e.g. to ISO 9000ff, GS 9000, TS 16949, VDA 6.1, FDA, GLP, GMP, GMP etc.)
- What? Any checking equipment in proper condition can be DAkkS calibrated
- How? Determination of accuracy throughout the world by a laboratory which is accredited to DIN EN ISO 17025. Traceability to internationally recognised standards. The DAkkS calibration certificate confirms both the measurement characteristics of the checking equipment and the general requirements for the control of checking equipment.
- Where? Internationally recognised this is monitored by ILAC (International Laboratory Accreditation Cooperation) and e.g. DAkkS (German calibration service) in Germany
- When? The operator control the use of checking equipment and periodic recalibration time intervals themselves

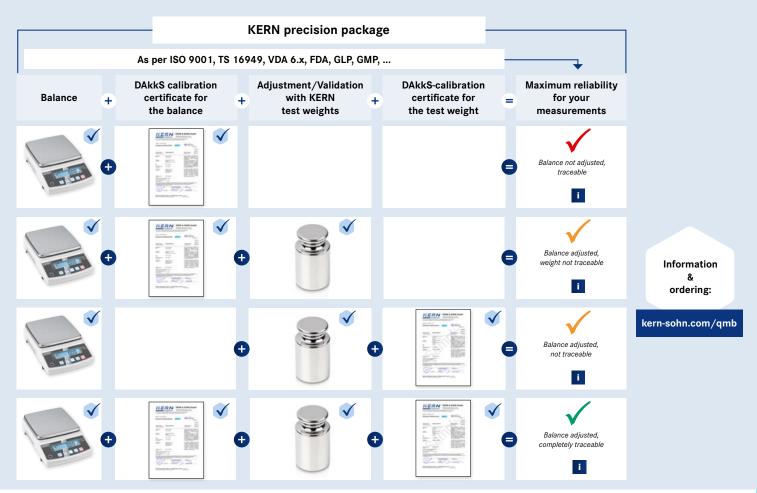
### Range of services:

- DAkkS calibration of balances with a maximum load of up to 50.000 kg
- DAkkS calibration of weights in the range of 1 mg – 2.500 kg. Calibrations can be carried out in the following classes: E1, E2, F1, F2, M1, M2, M3
- DAkkS calibration of force gauges and force transducers
- Volume determination for weights of accuracy class E1
- Measuring of sensitivity (magnetic characteristics)
- Factory calibration in various sizes:
- Force (sensors and measuring devices), hardness (Shore, UCI, Leeb, etc.), thickness of coatings and walls, torque wrench testing devices, and much more
- Conformity assessments and recalibration of balances and weights at the KERN verification point, working closely with the verification authorities

And on top of all these services, we also offer additional services – see page 204/205.

### Balance & weight in the quality management system

Do you already use all the modules of the KERN precision package for maximum accuracy and reliability of your balance?



### The KERN calibration laboratory (D-K-19408-01-00)

KERN has a highly-automated DAkkS laboratory with accreditation to DIN EN ISO/IEC 17025 in the field of balances, test weights and force measurement. By using the most modern calibration technology with high-end calibration robots in fully air-conditioned laboratories, the measurement uncertainty and process times are reduced to a minimum, and also the quality of the calibration is increased.

As an accredited and certified calibration service provider with decades of experience, KERN offers you an extensive range of services, which will leave no demand unfulfilled. The accreditation applies to the extent specified in the appendix to the certificate D-K-19408-01-00.

### We offer the following services:

### Waagen:

- DAkkS calibration up to 50 t
- Minimum sample weight (in use)
- ► Usage accuracy
- Adjustment at the location of installation
- Certificate of conformity
- Equipment qualification:
- > Installation qualification (IQ)
- > Function qualification (OQ)
- > Performance qualification (PQ)
- > Maintenance qualification (MQ)
- Verification

### Weights:

- DAkkS calibration up to 2.5 t (OIML classes E1 – M3)
- ► Volume determination for OIML class E1
- Measuring of sensitivity (magnetic characteristics)
- ► Verification

## Force measuring devices and force transducers:

DAkkS calibration up to 5 kN

### Factory calibration for:

- Force measuring devices and force transducers ≤ 250 kN
- Hardness
- Layer thickness
- Material thickness
- ► Temperature of moisture analysers

### KERN calibration service

Our commitment to satisfy our customers never stops. Perhaps this is one of the reasons why our roots can perhaps be traced so far back in history. **Discover the KERN route to success: fast - competent - reliable - versatile!** 

### The order process

You will receive a **reminder** that your test equipment is due or you will generate online a quotation for new or existing test equipment

Submission or collection of your test equipment

Initial inspection of your goods, to check that they are suitable for calibration, and are complete, etc.

You will get a detailed order confirmation



Our experts will carry out initial calibration

Checked for conformity with required tolerances and if required, any necessary actions which arise from this are carried out

Before these actions are carried out, we will contact you (in so far as no individual processing has been agreed with you beforehand)

After your approval the necessary actions will be implemented and the calibration will be completed

After that your test equipment will be returned to you without delay, together with the appropriate calibration certificates

We will monitor your recalibration periods and will send you a reminder about your next calibration, free of charge

### Our service

### Reminder service

The continuous cyclic recalibration of your checking equipment is an integral part of the reliable management of test equipment. You can rely on us to support you, and we will remind you in time, free of charge, when the next recalibration is due. In addition, you have the option of managing your test equipment online by yourself (cf. (1), (0).

#### ► Quote generator

You will be impressed by our price-to-performance ratio. Request a non-binding quotation or create it yourself to suit your specifications at www.kern-lab.com (cf. 1)

#### Collection service

We will be pleased to arrange a pick up by our forwarding agent the goods from your premises. You only need to tell us the weight and dimensions of your package and leave the rest to us (cf. 2)

### Repair and reconditioning of balances and weights

KERN will get your weights back up to standard, regardless of the manufacturer. Whether it is adjustment, marking, sand blasting or lacquering - the aim here is compliance and long-term stability. Any repairs of balances and instruments which may be necessary can be carried out quickly and easily (cf. (5))

### Individual processing

In order to avoid delays with future orders, we would be pleased to incorporate your individual requirements for future processing of such calibration results. Even for smaller issues such as the printing of calibration certificates (stapling, punching, double-sided) we can work to your requirements (cf. 3).

### Express service and dispatch

If you need a particularly fast service, you can use your DAkkS express service. You will receive your test equipment after only 2 days (cf. **9**).

## www.kern-lab.com – the central portal for everything you need to know about the extensive KERN calibration services

On our website you will always find the latest news and useful information about testing and measuring devices, calibration, legal metrology and expansions to our range of services. You will also find numerous online services on the website.

### Database supported management of test equipment

Information on your test equipment which has been calibrated by us is stored in our database. In this way it is possible to make trend calculations. You will therefore get an overview about the long-term stability and trend behaviour of your test equipment as well as the necessary recalibration period can easily be determined and specified.

### Paperless documentation

So there is no administrative effort, we can handle all calibration documentation in a paperless process. From quotation, through to order confirmation, delivery note and invoice right up to calibration certificate, you will receive all documents by e-mail or you can retrieve them online. Would you prefer to receive your certificate or your invoice in paper form, for example? Of course this is not a problem either. We will send you everything you require by post.

#### Calibration certificate download

By using our download service you can easily download your calibration certificates as soon as the calibration work is complete and you will have access to them at any time in the future. Simply create your user account on www.kern-lab.com and you will never have to look for your certificates again.

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### **KERN Calibration Service**

### **DAkkS Calibration of balances**

Any balance will only give correct results if it is checked regularly, i.e. calibrated correctly and adjusted when required. A balance is only a reliable measuring and checking tool if it is calibrated and this calibration is documented. The issued DAkkS calibration certificates are proof of the metrological traceability to national and international standards, as required by the DIN EN ISO 9000 and DIN EN ISO/IEC 17025 standards, amongst others. KERN recommends a recalibration period of one year. The standard does not give a defined recalibration period. KERN recommends that, with intensive (daily) use, you to recalibrate your balance every 6 months and at normal (weekly) use, every 12 months.

### THE ADVANTAGES OF USING THE KERN ON-SITE CALIBRATION:

- + Calibration on-site at your premises in the field of use
- + No risk of damage during transportation
- + Low downtime
- + Cross-brand servicing, basic inspection and adjustment by a specialist
- + You tell us when you would like us to come
- + Device training for qualified users



### a) KERN on-site calibration (we visit you)

In Germany, KERN has a close-knit network of KERN DAkkS calibration laboratory employees, who can carry out on-site calibration of balances up to 50 tonnes.

This on-site testing service is metrologically recommended, as your balance is in its field of use and can be calibrated without any possible transportation problems.

Lower downtime and personal contact with our expert are the major benefits of this service.

Preparatory maintenance work by agreement. Prices for on-site calibration on request.

You tell us when you would like us to come, giving us details of the balances to be tested. Our on-site DAkkS calibration team will then get in touch with you immediately and will discuss the process with you at your premises – it's straight forward and professional.

### This KERN calibration service is also independent of the brand.

Please feel free to contact us at Phone +49 7433 9933-400 or E-Mail: testservices-onsite@kern-sohn.com



- + Short calibration time: Test time in the laboratory is only four working days
- + **Competence:** Calibration laboratory, which complies with the highest standards in the area of metrology
- + Independent management of the recalibration calendar for your individual measuring instrument is possible
- + Cross-brand service: Measuring devices from any manufacturer can be calibrated independently
- + **Repair:** Any necessary repairs can be carried out immediately, if you wish



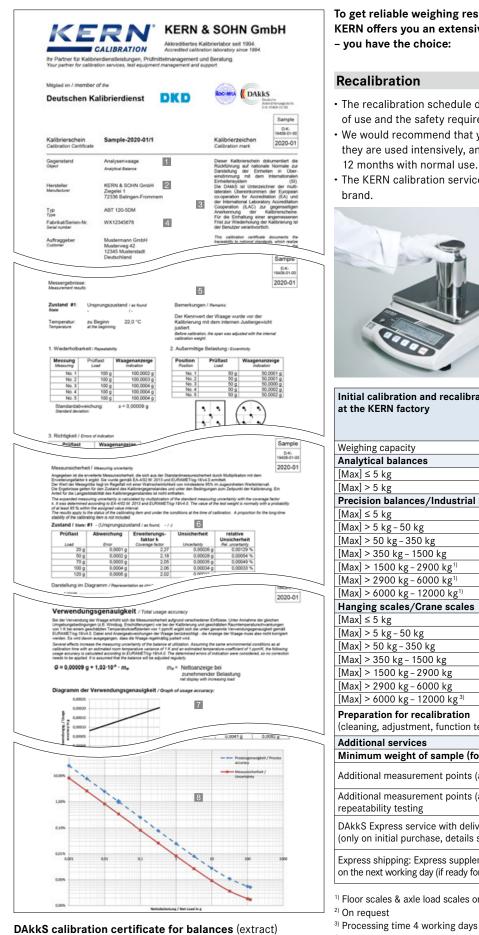
### b) Calibration at the KERN factory (you send your balance to us)

Recommended for new devices and for balances which can be affordably transported, as then there is no need for us to travel to carry out the calibration on-site. Repairs can be carried out at the same time, quickly and in full.

#### The process would be as follows:

- Day 1: Send your balance to the KERN calibration laboratory in Balingen.
- Day 2 to 3: Evaluation and calibration of your balance by our specialists.
- Day 4: After positive validation, your balance is returned.

Please feel free to contact us at Phone +49 7433 9933-400 or E-Mail: recalibration-balances@kern-sohn.com



To get reliable weighing results you need to have calibrated balances. KERN offers you an extensive calibration service for your balances - you have the choice:

- The recalibration schedule depends on the frequency of use, the conditions of use and the safety requirements.
- · We would recommend that you recalibrate your balances every 6 months if they are used intensively, and every
- The KERN calibration service is independent of the



Initial calibration and recalibration of balance at the KERN factory	KERN	Price excl. of VAT ex works €
Weighing capacity		
Analytical balances		
[Max] ≤ 5 kg	963-101	160,-
[Max] > 5 kg	963-102	205,-
Precision balances/Industrial scales		
[Max] ≤ 5 kg	963-127	82,-
[Max] > 5 kg - 50 kg	963-128	99,-
[Max] > 50 kg - 350 kg	963-129	122,-
[Max] > 350 kg - 1500 kg	963-130	173,-
[Max] > 1500 kg - 2900 kg <sup>1)</sup>	963-131	230,-
[Max] > 2900 kg - 6000 kg <sup>1)</sup>	963-132	460,-
[Max] > 6000 kg - 12000 kg <sup>1</sup> )	963-133	520,-
Hanging scales/Crane scales		
[Max] ≤ 5 kg	963-127H	82,-
[Max] > 5 kg - 50 kg	963-128H	99,-
[Max] > 50 kg - 350 kg	963-129H	116,-
[Max] > 350 kg - 1500 kg	963-130H	210,-
[Max] > 1500 kg - 2900 kg	963-131H	315,-
[Max] > 2900 kg - 6000 kg	963-132H	520,-
[Max] > 6000 kg - 12000 kg <sup>3</sup>	963-133H	730,-
Preparation for recalibration (cleaning, adjustment, function test)	969-003R	20,-
Additional services		
Minimum weight of sample (for details see p. 206)	969-103	10,-
Additional measurement points (as part of the) weighing test	963-140	5,-/ measurement point
Additional measurement points (as part of the) repeatability testing	963-140	<b>5,-/</b> each further m.p.
DAkkS Express service with delivery time 48 hours (only on initial purchase, details see p. 210)	962-116	50,-/ scale
Express shipping: Express supplement for guaranteed delivery on the next working day (if ready for shipment before 12:00 noon)	962-115 in GER only (other countries on request)	20,- / parcel

<sup>1)</sup> Floor scales & axle load scales only (Price per weighing panel). Please ask for further details.

- <sup>3)</sup> Processing time 4 working days
- <sup>4)</sup> Processing time 15 working days

- Official document
- Item to be calibrated
- **18** In Traceability, see page 217
- Identification/Applicant
- Metrological component
  - Incertainty of measurement, see page 217
- Application accuracy, see page 215 Minimum weight of sample
- (additional price)

### Minimum weight of sample (in use)

### What is the lightest item you can weigh on your balance, while still achieving accurate and reliable weighing results? What exactly is the limit?

The KERN minimum sample weight protocol accounts for the established minimum sample weight of your balance and its location of installation and use with the relative measuring uncertainty. With various safety coefficients and required weighing accuracy (process accuracy), depending on standard or quality-related requirements on the balance being used. The higher the selected safety coefficient, the higher the safety when using the balance in a particular process. Typical perturbations when using the balance e.g. small fluctuations in temperature are taken into account. In easily predictable conditions in a professional environment of use, KERN recommends a safety coefficient of 3. For critical processes, a correspondingly higher factor should be selected. The minimum sample weight protocol contains a diagram as well as a table, from which you can ascertain the minimum sample weight for your balance, depending on the process.

### Adjustment at the location of installation

### Why?

Adjustment at the location of installation is necessary, as the measuring results of balances depend on the local gravitational force (gravitational acceleration) and therefore depend on the location of use. KERN can carry this out just before shipping at the factor, individually to suit the location of installation.

### What are the advantages of carrying out adjustment at the location of installation?

- The balance gives reliable measurement results at the location of installation.
- No time-consuming on-site adjustment necessary.
- You do not need a Service Engineer or any additional weights.
- The balance is ready for immediate use.

### Certificate of conformity

With a certificate of conformity you get a statement about whether the balance meets your defined requirements.

In conjunction with a DAkkS calibration certificate it serves as documented proof that the balance fulfils the required process demands. When doing this the process owner for the balance can select from different temperature specifications – depending on its individual requirements:

Conformity evaluation on the basis of the:	KERN		Price excl. of VAT ex works €
Usage accuracy*	relative absolute	969-511 969-512	on request
Calibration results*	relative absolute	969-513 969-514	on request
Measurements as manufacturer or customer specification	Foreign device Customer specifications KERN devices	969-515 969-516 969-517	on request

relative = % / absolute = g

\*as attachment to the DAkkS calibration certificate (Details see www.kern-lab.com)

## Example for absolute customer tolerance (absolute) (Item no. 969-511):

No.	Tare	Load	Display	Deviation	Uncertainty	Customer tolerance	Conformity <sup>1)</sup>
1	0 g	500 g	500,00 g	0,00 g	± 0,013 g	± 0,05 g	V
2	0 g	1000 g	1000,00 g	0,00 g	± 0,015 g	± 0,05 g	N
3	0 g	1500 g	1500,01 g	0,01 g	± 0,017 g	± 0,05 g	V
4	0 g	2000 g	2000,01 g	0,01 g	± 0,020 g	± 0,10 g	V
5	0 g	3000 g	3000,02 g	0,02 g	± 0,022 g	± 0,10 g	V

1) Evaluation criteria: |[Deviation]| + [extended measuring uncertainty] ≤ [tolerance]

www.kern-lab.com · Calibration hotline +49 7433 9933-196

### Pricing table for adjustment at the location of installation

Weighing capacity	KERN	Price excl. of VAT ex works €
[Max] ≤ 5 kg	961-247	36,-
[Max] > 5 – 50 kg	961-248	44,-
[Max] > 50 – 350 kg	961-249	52,-
[Max] > 350 - 1500 kg	961-250	83,-
[Max] > 1500 - 2900 kg	961-251	110,-
[Max] > 2900 - 6000 kg	961-252	220,-
[Max] > 6000 - 12000 kg	961-253	250,-

For adjustment to the location of installation you need the value for gravitational acceleration at the location of installation, which KERN can calculate using the point of use. The procedure is suitable for balances with a resolution of <60,000 d. For higher resolutions we recommend a balance with an internal adjusting weight or adjustment with a calibrated adjusting weight at the location of installation.

# Documented quality of your balances in the log book

Consistently high product quality requires the use of measuring and test equipment that provides comprehensible, consistent and reproducible results. Hence, quality management systems require that measuring and test equipment produces a detailed traceable description and documentation of calibration results and conformity statements. Work not documented is work not done.

Equipment qualification is documentary evidence that a equipment is suitable for the intended purpose and is working faultlessly. A balance log book is used to record all activities and results required for the qualification and monitoring of balances during routine operation. This includes the installation and commissioning of the balances, routine tests, maintenance as well as the recording of special events (failures, repairs, change of location).

The structure of the balance log book is based on the qualification process of the balance. The requirements for the qualification system such as DIN EN ISO 9001, DIN EN ISO/IEC 17025, GLP/GMP, VDA must be taken into account. The log book supports the user in his/her daily work with the balance and is meant to serve as necessary evidence during inspections and audits. The responsibility for maintaining the log book and its appropriate use is to be borne by the user.

### Our proposal: Count on our support!

KERN offers this qualification concept throughout. Our validation services are carried out on the spot by technicians of our calibration laboratory and comprise among other things: installation, measurement test inclusive DAkks calibration certificate as well as records in your qualification log book.

We give you advice already when selecting a new device, for example KERN ADB/ADJ, ALS/ALJ, ABS/ABJ, ACJ, ABT, ABP, PLS/PLJ, PNS/PNJ, EG-N, PBS/PBJ, PES/PEJ, about the options of device qualification, as required and will be happy to set up an appointment for qualification at the place of installation. We offer individual calibration and maintenance agreements for the periodically required requalification.

### Further information can be found at www.kern-lab.com

### Installation qualification (IQ)

All steps to be taken for the installation and commissioning of the equipment are described in detail in the installation qualification. These include among others:

- checking for completeness of delivery and assurance that the delivered equipment meets the required specifications
- a description of the ambient conditions at the place of installation
- proper installation and assurance that the equipment is ready for operation after installation
- $\boldsymbol{\cdot}$  documentation of equipment configuration and equipment settings
- Recording and installation of connected peripherals units

### Function qualification (OQ)

The operational qualification describes the metrological test performed for the balance at the place of installation. In the course of this all parameters that define the efficiency of a measurement will be checked. Functional qualification is carried out with the help of a standard operating procedure (SOP) and recorded in a calibration certificate. The OQ must be carried out by trained staff with the help of qualified aids (such as certified weights that are traceable to an approved standard). Briefing / training of users must be assured and recorded in the OQ.

### Performance qualification (PQ)

The PQ represents documented evidence that the balance or weighing system functions in the selected application as intended. This will be assured by a qualification test of the equipment under real conditions with respect to its surroundings and the problem definition (such as traceable data transmission). If the balance or weighing system is "merely" to be used for weighing it will not be necessary to carry out a PQ as the ability to function has already been proven during the metrological test (OQ).

 $\checkmark$ 

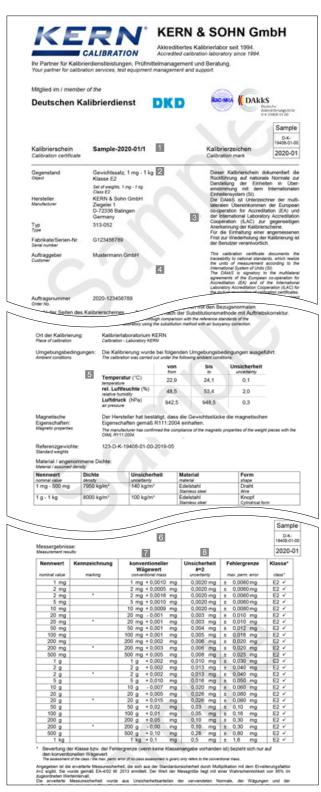
### Maintenance qualification (MQ)

The periodical maintenance, cleaning work and complete metrological test of the balance/weighing system is documented in the MQ by a trained authorised engineer. The results are documented on a DAkkS calibration certificate. Maintenance is carried out with the help of a maintenance schedule.





If you are interested in a training for equipment qualification, please feel free to contact us at **+49 7433 9933-400** or **testservices-onsite@kern-sohn.com** 



DAkkS calibration certificate for test weights (extract). For more details on our calibration service and other useful information, please see the internet at www.kern-lab.com

- Official document
- Item to be calibrated
- Traceability, see page 217
- Identification/Applicant
- 5 Environmental conditions
- Metrological component
- Conventional mass
- Incertainty of measurement, see page 216

### Traceable KERN test weights -

#### **Calibration of test weights**

Calibrated measuring equipment requires calibrated checking equipment. For balances, these are calibrated test weights, also called "standard weights".

### KERN will calibrate your test weights

- In all classes with permissible error limits  $\mathsf{E1}\text{-}\mathsf{M3}$  according to  $\mathsf{OIML}$
- R111:2004 (for tolerance tables, see page 180), in sizes 1 mg to 2500 kg. • With free nominal value
- Newton (N)
- · Independent of design (special designs)

### The advantages of using the KERN in-house calibration

#### You send your test weights to us.

- Excellent price performance ratio
- The quickest processing time
  - DAkkS standard service: 4 working days
  - DAkkS express service: 48 hrs (new weights)
- The most modern calibration methods with robot controlled comparators
   allow the most accurate calibration results and fastest throughput time
- KERN DAkkS calibration certificates are internationally recognised
- A calibration service which is independent of the brand
- KERN also reconditions existing customer weights (e.g. cleaning or readjustment)
- On request, we can also provide a pick-up and collection service with our parcel service

### The advantages of using the KERN on-site calibration

#### We visit you.

We would be pleased to visit you within Germany and carry out the calibration of your reference standards to OIML classes M1–M3, 10 kg–2500 kg with permissible error limits, using our mobile MACOS system. Minimized downtime of your checking equipment and direct contact with our expert are the major benefits of this service. Price on request.

### Recalibration

- The recalibration schedule depends on the frequency of use, the conditions of use and the safety requirements
- In terms of standardisation, no particular recalibration interval is specified
- We would recommend that you recalibrate your test weights every six months if they are used intensively, and every 12 months with normal use
- We would be pleased to monitor your recalibration schedule

### Recalibration price of test weights (DAkkS calibration)

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-	-	962-252R	63,-	962-352R	30,-	962-452R	20,-	962-652R	16,-
-	-	962-253R	63,-	962-353R	30,-	962-453R	20,-	962-653R	16,-
-	-	962-254R	63,-	962-354R	30,-	962-454R	20,-	962-654R	16,-
-	-	962-255R	63,-	962-355R	30,-	962-455R	20,-	962-655R	16,-
-	-	962-256R	63,-	962-356R	30,-	962-456R	20,-	962-656R	16,-
-	-	962-257R	63,-	962-357R	30,-	962-457R	20,-	962-657R	16,-
-	-	962-258R	63,-	962-358R	30,-	962-458R	20,-	962-658R	16,-
-	-	962-259R	63,-	962-359R	30,-	962-459R	20,-	962-659R	16,-
963-231	230,-	962-231R	63,-	962-331R	30,-	962-431R	20,-	962-631R	16,-
963-232	230,-	962-232R	63,-	962-332R	30,-	962-432R	20,-	962-632R	16,-
963-233	230,-	962-233R	63,-	962-333R	30,-	962-433R	20,-	962-633R	16,-
963-234	230,-	962-234R	63,-	962-334R	30,-	962-434R	20,-	962-634R	16,-
963-235	230,-	962-235R	63,-	962-335R	30,-	962-435R	20,-	962-635R	16,-
963-236	230,-	962-236R	63,-	962-336R	30,-	962-436R	20,-	962-636R	16,-
963-237	230,-	962-237R	63,-	962-337R	38,-	962-437R		962-637R	18,-
963-238	230,-	962-238R	63,-	962-338R	38,-	962-438R	/		18,-
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903-221	2450,-	902-221R	540,-	902-321R	395,-	902-421R	183,-	962-621R	106,-
	with volume / KERN	with volume determination           KERN         Price € excl. of VAT ex works           -         -           963-233         230,-           963-234         230,-           963-237         230,-           963-238         230,-           963-241         230,-           963-242         510,-           963-243         510,-           963-244         510,-           963-245         1	with volume determination         determination           KERN         Price € excl. of VAT ex works         KERN           -         -         962-251R           -         -         962-252R           -         -         962-253R           -         -         962-253R           -         -         962-255R           -         -         962-257R           -         -         962-257R           -         -         962-257R           -         -         962-253R           -         -         962-258R           -         -         962-258R           -         -         962-258R           -         - 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        -         962-232R         63,-           -         -         962-233R         63,-           963-231         230,-         962-233R         63,-           963-233         230,-         962-237R         63,-           963-234         230,-         962-237R         63,-           963-237         230,-         962-237R         63,-           963-238         230,-         962-237R         63,-           963-241         230,-         962-247R	with volume determination         determination         Price € excl. of VAT ex works         Price € excl. of VAT ex works         KERN         Price € excl. of VAT ex works           -         -         962-251R         63,-         962-351R           -         -         962-252R         63,-         962-353R           -         -         962-253R         63,-         962-353R           -         -         962-255R         63,-         962-355R           -         -         962-256R         63,-         962-355R           -         -         962-256R         63,-         962-357R           -         -         962-256R         63,-         962-358R           -         -         962-258R         63,-         962-358R           -         -         962-231R         63,-         962-331R           963-232         230,-         962-232R         63,-         962-333R           963-234         230,-         962-233R         63,-         962-333R           963-235         230,-         962-234R         63,-         962-337R           963-234         230,-         962-234R         63,-         962-337R           963-243 <td< td=""><td>with volume determination         determination         Price € excl. of VAT ex works         KERN         Price € excl. of VAT ex works         Price € excl. of VAT ex works         Price € excl. of VAT ex works           -         -         962-251R         63,-         962-351R         30,-           -         -         962-252R         63,-         962-353R         30,-           -         -         962-253R         63,-         962-353R         30,-           -         -         962-255R         63,-         962-355R         30,-           -         -         962-255R         63,-         962-356R         30,-           -         -         962-257R         63,-         962-358R         30,-           -         -         962-258R         63,-         962-358R         30,-           -         -         962-231R         63,-         962-331R         30,-           -         -         962-233R         63,-         962-333R         30,-           963-231         230,-         962-233R         63,-         962-333R         30,-           963-234         230,-         962-238R         63,-         962-338R         38,-           963-235</td><td>with volume determination         determination         **F2 only           KERN         Price € excl. of VAT ex works         KERN         Price € excl. of VAT ex works         KERN         Price € excl. of VAT ex works           -         -         962-251R         63,-         962-351R         30,-         962-452R           -         -         962-252R         63,-         962-353R         30,-         962-452R           -         -         962-253R         63,-         962-353R         30,-         962-453R           -         -         962-255R         63,-         962-356R         30,-         962-455R           -         -         962-255R         63,-         962-358R         30,-         962-455R           -         -         962-257R         63,-         962-358R         30,-         962-458R           -         -         962-253R         63,-         962-331R         30,-         962-458R           -         -         962-257R         63,-         962-331R         30,-         962-433R           963-231         230,-         962-233R         63,-         962-333R         30,-         962-433R           963-232         230,-         962-233R</td><td>with volume determination         determination         Price €         *F2 only           KERN         excl. of VAT ex works         Price €         excl. of VAT ex works         Price €         excl. of VAT ex works         Price €         excl. of VAT ex works         Cal. of VAT ex works</td><td>with volume determination         determination         ref2 only         ref2 only         ref2 only         ref2 only           KERN         Price 6 ext. of VAT ex works         Price 6 excl. of VAT ex works</td></td<>	with volume determination         determination         Price € excl. of VAT ex works         KERN         Price € excl. of VAT ex works         Price € excl. of VAT ex works         Price € excl. of VAT ex works           -         -         962-251R         63,-         962-351R         30,-           -         -         962-252R         63,-         962-353R         30,-           -         -         962-253R         63,-         962-353R         30,-           -         -         962-255R         63,-         962-355R         30,-           -         -         962-255R         63,-         962-356R         30,-           -         -         962-257R         63,-         962-358R         30,-           -         -         962-258R         63,-         962-358R         30,-           -         -         962-231R         63,-         962-331R         30,-           -         -         962-233R         63,-         962-333R         30,-           963-231         230,-         962-233R         63,-         962-333R         30,-           963-234         230,-         962-238R         63,-         962-338R         38,-           963-235	with volume determination         determination         **F2 only           KERN         Price € excl. of VAT ex works         KERN         Price € excl. of VAT ex works         KERN         Price € excl. of VAT ex works           -         -         962-251R         63,-         962-351R         30,-         962-452R           -         -         962-252R         63,-         962-353R         30,-         962-452R           -         -         962-253R         63,-         962-353R         30,-         962-453R           -         -         962-255R         63,-         962-356R         30,-         962-455R           -         -         962-255R         63,-         962-358R         30,-         962-455R           -         -         962-257R         63,-         962-358R         30,-         962-458R           -         -         962-253R         63,-         962-331R         30,-         962-458R           -         -         962-257R         63,-         962-331R         30,-         962-433R           963-231         230,-         962-233R         63,-         962-333R         30,-         962-433R           963-232         230,-         962-233R	with volume determination         determination         Price €         *F2 only           KERN         excl. of VAT ex works         Price €         excl. of VAT ex works         Price €         excl. of VAT ex works         Price €         excl. of VAT ex works         Cal. of VAT ex works	with volume determination         determination         ref2 only         ref2 only         ref2 only         ref2 only           KERN         Price 6 ext. of VAT ex works         Price 6 excl. of VAT ex works

Additional costs for preparation, overhaul and adjustment before the calibration	KERN	Price excl. of VAT ex works €
Preparation of weights (e.g. cleaning, etc.)		
Single weight	969-001R	3,-
Weight set	969-002R	16,-
Subsequent services are carried out after confirmation		
Continued overhaul of weights (e.g. wet-cleaning, markings, repair, special packaging, adjustment E1 (DAkkS only), E2)	969-005R	T & M basis
Adjustment, per weight only available for weights with adjustment chamber (F1–M3)	969-010R	12,-
Second calibration after adjustment or substitution, per weight		
Class E1	969-210R	40,-
Class E1 incl. volume determination	969-211R	80,-
Class E2	969-310R	14,-
Class F1/F2	969-410R	14,-
Class M1-M3	969-610R	14,-
Testing of magnetic properties according to OIML R111:2004, per weight	961-115(R)	13,-
Calibration of NON-OIML test weights, additional price per weight	-	8,-

KERN DAkkS Express Service						
DAkkS standard service Class E2-M3	4 working days					
DAkkS standard service Class E1, 1 mg-500 mg, and recalibration 1 g-10 kg with a known volume	10 working days					
Class E1, ≥ 1 g, incl. volume determination (new weights)	15 working days					

**DAkkS Express service in 48 hours** 48 HRS except for class E1

- Urgent order is received at KERN by 12:00 noon at the latest
- Ready for shipping at KERN within two working days, at 12:00 noon
- Return by standard parcel service or express shipping (Costs and processing time on request)
- Additional cost for DAkkS Express Service, for each KERN test weight KERN KERN 962-115 € 20,-
- For Express shipping, see page 206

### Verification prices for test weights and (crane) scales

Class acc. OIML R111:2004	- 1		F1 with verific certificate	cation	M1 with verificate	ication
Nominal value ↓	KERN	Price excl. of VAT ex works €	KERN	Price excl. of VAT ex works €	KERN	Price excl. of VA ex works €
1 mg	952-351	47,-	952-451	41,-	952-651	28,-
2 mg	952-352	47,-	952-452	41,-	952-652	28,-
5 mg	952-353	47,-	952-453	41,-	952-653	28,-
10 mg	952-354	47,-	952-454	41,-	952-654	28,-
20 mg	952-355	47,-	952-455	41,-	952-655	28,-
50 mg	952-356	47,-	952-456	41,-	952-656	28,-
100 mg	952-357	47,-	952-457	41,-	952-657	28,-
200 mg	952-358	47,-	952-458	41,-	952-658	28,-
500 mg	952-359	47,-	952-459	41,-	952-659	28,-
1 g	952-331	47,-	952-431	41,-	952-631	28,-
2 g	952-332	47,-	952-432	41,-	952-632	28,-
285g	952-333	47,-	952-433	41,-	952-633	28,-
10 g	952-334	47,-	952-434	41,-	952-634	28,-
20 g	952-335	47,-	952-435	41,-	952-635	28,-
50 g	952-336	/	952-436	41,-	952-636	28,-
100 g	952-330	47,-	952-430			· · · · · · · · · · · · · · · · · · ·
200 g		53,-		41,-	952-637	28,-
200 g	952-338	53,-	952-438	43,-	952-638	28,-
	952-339 952-341	53,-	952-439 952-441	43,- 43,-	952-639 952-641	28,-
2 kg		53,-	952-441		952-641	28,-
2 kg 5 kg	952-342	60,-	952-442	47,-	952-642	30,-
	952-343	60,-		47,-		30,-
10 kg	952-344	60,-	952-444	47,-	952-644	37,-
20 kg	952-345	69,-	952-445	49,-	952-645	43,-
50 kg	-	-	952-446	59,-	952-646	44,-
1 mg-500 mg	952-350	235,-	952-450	124,-	952-650	78,-
1 mg-50 g	952-301	390,-	952-401	205,-	952-601	130,-
1 mg-100 g	952-302	420,-	952-402	220,-	952-602	138,-
1 mg-200 g	952-303	475,-	952-403	245,-	952-603	154,-
1 mg-500 g	952-304	510,-	952-404	255,-	952-604	161,-
1 mg-1 kg	952-305	530,-	952-405	270,-	952-605	169,-
1 mg-2 kg	952-306	610,-	952-406	305,-	952-606	187,-
1 mg-5 kg	952-307	660,-	952-407	330,-	952-607	198,-
1 mg-10 kg	952-308	690,-	952-408	350,-	952-608	205,-
1 g-50 g	952-315	156,-	952-415	90,-	952-615	59,-
1 g-100 g	952-316	185,-	952-416	95,-	952-616	63,-
1 g-200 g	952-317	240,-	952-417	121,-	952-617	75,-
1 g-500 g	952-318	280,-	952-418	134,-	952-618	83,-
1 g-1 kg	952-319	300,-	952-419	147,-	952-619	92,-
1 g-2 kg	952-320	375,-	952-420	186,-	952-620	109,-
1 g-5 kg	952-321	415,-	952-421	205,-	952-621	119,-
1 g-10 kg	952-322	460,-	952-422	225,-	952-622	128,-

KERN verification delivery time					
<b>Standard verification service</b> Class E2 – M1	6 working days				

Additional costs for preparation, overhaul and adjustment before the verification	KERN	Price excl. of VAT ex works €			
Preparation of weights (e	.g. cleaning	, etc.)			
Single weight	969-008R	3,-			
Weight set	969-009R	16,-			
Subsequent services are confirmation	carried out	after			
Continued overhaul of weights (e.g. wet-cleaning, markings, repair, special packaging, adjustment E2)	969-005R	T & M basis			
Adjustment, per weight only available for weights with adjustment chamber (F1/F2 – M1)	969-010R	12,-			
Verification after adjustment or substitution, per weight					
Class E2	969-310R	14,-			
Class F1/F2	969-410R	14,-			
Class M1	969-610R	14,-			

Verification prices for balances	Reverification	Price excl. of VAT
		ex works
	KERN	€
Accuracy class I (precision balances) <sup>1)</sup>		
$[Max] \le 5 \text{ kg}^{-1}$	950-101R	210,-
[Max] > 5 kg <sup>1</sup> )	950-102R	270,-
Accuracy class II (precision balances) <sup>1)</sup>		
$[Max] \le 5 \text{ kg}^{-1}$	950-116R	106,-
$[Max] > 5 kg - 50 kg^{-1}$	950-117R	129,-
$[Max] > 50 \text{ kg} - 350 \text{ kg}^{-1}$	950-118R	200,-
Accuracy class III-IV <sup>1)</sup>		
Bench scales and industrial scales (excl. crane scales)		
$[Max] \le 5 \text{ kg}^{-1}$	950-127R	101,-
$[Max] > 5 kg - 50 kg^{-1}$	950-128R	101,-
[Max] > 50 kg - 350 kg <sup>1</sup> )	950-129R	162,-
[Max] > 350 kg - 1500 kg <sup>1)</sup>	950-130R	235,-
[Max] > 1500 kg - 2900 kg <sup>1</sup> )	950-131R	330,-
[Max] > 2900 kg - 6000 kg <sup>1</sup> )	950-132R	510,-
Crane scales		
$[Max] > 50 \text{ kg} - 350 \text{ kg}^{-1}$	950-129HR	176,-
[Max] > 350 kg - 1500 kg <sup>1</sup> )	950-130HR	290,-
[Max] > 1500 kg - 2900 kg <sup>1</sup> )	950-131HR	420,-
[Max] > 2900 kg - 6000 kg <sup>1</sup> )	950-132HR	640,-
[Max] > 6000 kg - 12000 kg <sup>1</sup> )	950-133HR	1020,-

<sup>1)</sup> Processing time 4 working days, <sup>2)</sup> Processing time 15 working days, <sup>1) 2)</sup> Preparation of reverification of balances, 969-006R, € 20,-

### The force gauge

### Accredited calibration with DAkkS calibration certificate for force gauges

The KERN calibration laboratory is at your side when you need to calibrate according to DAkkS.

From the transducer to the full measuring chain, we are happy to take care of traceable calibration of your test equipment for you. Our accreditation includes the calibration of tensile and pressure force up to 5 kN according to the standards DIN EN ISO 376 and DKD-R 3-3, each with the Newton (N) display unit for a complete measuring chain (situation A) or voltage ratio/transmission coefficient (mV/V, situation B).

Below you will find a comparison of which standard meets which criteria:

Comparison of DIN EN ISO 376 and DKD-R 3-3					
	ISO 376	DKD-R 3-3			
Standardization	ISO standard (internationally standardized)	Standard of the DKD (Germany)			
Measuring equipment	Force transducers and complete measuring chains	Force transducers and complete measuring chains			
Area of application	Specifically force gauges for the testing of testing equipment	General force gauges			
Number of power stages	8	5			
Classification/Assessment	Classification in classes 00; 0,5; 1 and 2	None in standard			
Test sequences Fixed procedure		Sequences A, B, C, D possible Standard is sequence A B, C and D are reduced sequences, relevant previous knowl- edge is necessary			
Summary	Higher-quality calibration, as 8 force levels are calibrated	High-quality calibration, reduced sequences with less effort possible			

We can offer you a calibration solution for the following situations:



DAkkS Calibration certificate for force-measuring devices (extract).

### The force gauge

### Prices for DAkkS calibration of force gauges and force transducers

Situation A: Force transducer (voltage ratio, in mV/V)* <sup>1,2</sup>							
ISO 376 (8 stages)			DKD-R 3-3 (5 stages, sequence A)				
KERN	Measuring range	Price € ex works excl. of VAT	KERN	Measuring range	Price € ex works excl. of VAT		
Tensile force:							
963-161IV (R)	≤ 500 N	199,-	963-161V (R)	≤ 500 N	185,-		
963-162IV (R)	≤ 2 kN	235,-	963-162V (R)	≤ 2 kN	220,-		
963-163IV (R)	≤ 5 kN	310,-	963-163V (R)	≤ 5 kN	285,-		
Compression for	ce:	, ,			, , , , , , , , , , , , , , , , , , , ,		
963-261IV (R)	≤ 500 N	199,-	963-261V (R)	≤ 500 N	185,-		
963-262IV (R)	≤ 2 kN	235,-	963-262V (R)	≤ 2 kN	220,-		
963-263IV (R)	≤ 5 kN	310,-	963-263V (R)	≤ 5 kN	285,-		
Tensile and Com	pression force:	, , , , , , , , , , , , , , , , , , , ,			,		
963-361IV (R)	≤ 500 N	330,-	963-361V (R)	≤ 500 N	310,-		
963-362IV (R)	≤ 2 kN	400,-	963-362V (R)	≤ 2 kN	370,-		
963-363IV (R)	≤ 5 kN	530,-	963-363V (R)	≤ 5 kN	485,-		

Situation B: Complete force gauge (in N)* <sup>2</sup>							
	ISO 376 (8 stages)		DK	D-R 3-3 (5 stages, seque	nce A)		
KERN	Measuring range	Price € ex works excl. of VAT	KERN	Measuring range	Price € ex works excl. of VAT		
Tensile force:							
963-1611 (R)	≤ 500 N	164,-	963-161 (R)	≤ 500 N	148,-		
963-162I (R)	≤ 2 kN	200,-	963-162 (R)	≤ 2 kN	182,-		
963-163I (R)	≤ 5 kN	275,-	963-163 (R)	≤ 5 kN	250,-		
Compression fo	rce:	*					
963-2611 (R)	≤ 500 N	164,-	963-261 (R)	≤ 500 N	148,-		
963-2621 (R)	≤ 2 kN	200,-	963-262 (R)	≤ 2 kN	182,-		
963-263I (R)	≤ 5 kN	275,-	963-263 (R)	≤ 5 kN	250,-		
Tensile and Con	npression force:						
963-361I (R)	≤ 500 N	295,-	963-361 (R)	≤ 500 N	270,-		
963-362I (R)	≤ 2 kN	365,-	963-362 (R)	≤ 2 kN	330,-		
963-363I (R)	≤ 5 kN	490,-	963-363 (R)	≤ 5 kN	445,-		

### Factory calibration for force

Situation A: Force transducer (voltage ratio, in mV/V) $^{\star1,2}$		Situation B: Complete force gauge (in N)* <sup>2</sup>			
KERN	Measuring range	Price € ex works excl. of VAT	KERN	Measuring range	Price € ex works excl. of VAT
Tensile force:			1		
961-161V (R)	≤ 500 N	185,-	961-161 (R)	≤ 500 N	148,-
961-162V (R)	≤ 2 kN	220,-	961-162 (R)	≤ 2 kN	182,-
961-163V (R)	≤ 5 kN	285,-	961-163 (R)	≤ 5 kN	250,-
961-164V (R)	≤ 20 kN	365,-	961-164 (R)	≤ 20 kN	325,-
961-165V (R)	≤ 50 kN	365,-	961-165 (R)	≤ 50 kN	325,-
961-166V (R)	≤ 250 kN	395,-	961-166 (R)	≤ 120 kN	360,-
Compression for	rce:	,			
961-261V (R)	≤ 500 N	185,-	961-261 (R)	≤ 500 N	148,-
961-262V (R)	≤ 2 kN	220,-	961-262 (R)	≤ 2 kN	182,-
961-263V (R)	≤ 5 kN	285,-	961-263 (R)	≤ 5 kN	250,-
961-264V (R)	≤ 20 kN	365,-	961-264 (R)	≤ 20 kN	325,-
961-265V (R)	≤ 50 kN	365,-	961-265 (R)	≤ 50 kN	325,-
961-266V (R)	≤ 250 kN	395,-	961-266 (R)	≤ 120 kN	360,-
Tensile and Com	pression force:				
961-361V (R)	≤ 500 N	310,-	961-361 (R)	≤ 500 N	270,-
961-362V (R)	≤ 2 kN	370,-	961-362 (R)	≤ 2 kN	330,-
961-363V (R)	≤ 5 kN	485,-	961-363 (R)	≤ 5 kN	445,-
961-364V (R)	≤ 20 kN	520,-	961-364 (R)	≤ 20 kN	485,-
961-365V (R)	≤ 50 kN	520,-	961-365 (R)	≤ 50 kN	485,-
961-366V (R)	≤ 250 kN	570,-	961-366 (R)	≤ 120 kN	530,-

(R): Recalibration

For each force gauge without interface or from other manufacturers we charge a surcharge of € 10,- for the additional effort.

<sup>\*1</sup> Compatibility with our amplifiers required

 $^{\ast_2}$  Installation in our measuring equipment required

### Factory calibration certificates

As DAkkS calibration certificates cannot be offered for all measuring devices or measurement sizes, or where it is not customary, we then offer factory calibration certificates. These calibration certificates meet international standards and are particularly suitable as proof of exacting calibration in the monitoring of your checking equipment, for example:

- Mechanical balances (spring balances, etc.)
- Force-measuring devices up to 250 kN (see also page 213)
- Measuring devices for layer thickness 0  $\mu m$  2000  $\mu m$
- · Hardness testing devices in accordance with Leeb tests
- Ultrasonic material thickness testing device 25 mm 300 mm

We carry out calibrations independent of brand. In order to avoid any unnecessary delays when processing your order, please send us the technical documents and necessary accessories with the checking device. Calibration time 4 working days.

For up-to-date information on test services for further measuring variables please see p. 213 or visit our website www.kern-lab.com

Ihr Partne Your partn	er for calibration						
Kalibriers Calibration		M8-123-KE	ERN-2020-12				
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Factory calibration certificate for torque wrench test devices (extract from the factory calibration certificate) Further details on the internet at www.kern-lab.com

KERN	Measuring device	Measuring range	Price excl. of VAT ex works €			
Factory calibration						
961-110	Coating thickness	≤ 2000 µm F or N	132,-			
961-112	Coating thickness	≤ 2000 µm FN	187,-			
961-113	Wall thickness (ultra sound)	≤ 300 mm (in stainless steel)	132,-			
961-114	Wall thickness (Test blocks)	≤ 300 mm	165,-			
961-170	Hardness comparison plate (Shore)	For sets up to 7 plates	105,-			
961-131	Hardness tester (Leeb)	400 – 800 HLD	132,-			
961-132	Hardness comparison plate (Leeb)	Hardness comparison plate (for Leeb durometer)	132,-			
961-270	Hardness (UCI)	200 - 800 HV	285,-			
961-150	Length	≤ 300 mm	132,-			
961-190	Light	≤ 200000 lx	182,-			
961-100	Mechanical balances/ spring balances	≤ 5 kg	79,-			
961-101	Mechanical balances/ spring balances	> 5 – 50 kg	97,-			
961-102	Mechanical balances/ spring balances	> 50 – 350 kg	116,-			
961-103	Mechanical balances/ spring balances	> 350 - 1500 kg	182,-			
961-102K	Digital dynamometer KERN MAP	≤ 130 kg	132,-			
961-120 (R)	Torque wrench test devices	1 Nm - 200 Nm	187,-			
Additional ser	Additional services					
962-116	Express service with 48 hour delivery		<b>50,</b> –/ instrument			

(R): Recalibration

For each force gauge without interface or from other manufacturers we charge a surcharge of  $\in$  10,- for the additional effort.

### A

### Accuracy classes for test weights

E, F, M ► Error limit classes

### Adjusting of measurement equipment

Precise setting of a measurement value via a professional intervention in the measurement system.

### Adjusting the weighing range of a balance

CAL INT CAL EXT

Either with the external test weight via the adjusting program CAL, or with the internal automatic adjustment resp. adjusting switch. It is necessary with variations in temperature, a change of environmental conditions, change of location, etc. Recommended as a daily check routine.

### Alibi memory

For weighings where verification is mandatory, and which are to be analysed and processed by a PC (e.g. printing out a packing list using a PC instead of a printer connected directly to the balance) electronic archiving is required by the metrological authorities by a verifiable data memory which cannot be manipulated. Alibi memories from KERN fulfil this requirement. They are for paperless archiving of weighing results. For KERN products the alibi memory is fitted inside the balance, right between where the weight is determined and the output to the PC.

All data transferred to the PC is stored with date, time and all important weights for at least three months. These stored data strings can be displayed on the balance at any time. The data in the alibi memory can be deleted, but not changed.

### Application accuracy

Allowance for measuring uncertainty during practical use of a balance. Is given in the appendix to the DKD calibration certificate.

### ATEX

Derived from **AT**mosphère **EX**plosibles. (explosive atmosphere). A synonym for EU guidelines, which controls the quality and use of equipment in hazardous industrial environments, where there is explosion danger, e.g. by handling of flammable substances, which are present in high concentrations in the form of gas, mist, vapour or dust. See also 2014/34/EU as well as 1999/92/EU.

### В

### Balances which are verified/not approved for verification

Metrologically almost identical. For verified balances certain details are regulated by law, e.g. software changes and additional markings.

### C

### CAL

Adjusting the balance is triggered with an external test weight by using the CAL key on the key pad or on the touch display of the display device or the CAL menu option. This will guarantee the consistent high accuracy of the balance.

### Calibration of measurement equipment

Determination of the precision of a measurement value without intervention in the measurement system. Example: to check a balance you load a ► *test weight* upon it. The term "Calibrating" was formerly also used for ► *Adjusting*.

### Calibration Certificate DKD/DAkkS

See product group 18 "Calibration service"

### Calibration or verification

n DARKS IV

DAkkS-Calibration is possible for every balance in perfect condition. DAkkS calibration (DKD) is a private service monitored by the state for ensuring high quality requirements according to ISO 9000ff and others, e.g. in production or research. Verifying (conformity assessment) is only possible for type-approved balances marked with the green M ► Verification

### **Commercial error limit**

Permitted tolerance (plus and minus) of measuring devices where verification is mandatory when used within their verification validity period. This tolerance is double the permissible error limit, in so far as this is not specified otherwise in the Weights and Measures Act).

### **Conformity assessment**

Procedure for confirming warranted characteristics in accordance with recognised rules. For balances this relates to verification.

### Conformity declaration from the manufacturer

The manufacturer declares that the product fulfils the applicable EU directives. With electronic balances this is always in conjunction with the CE mark.

# Control of measuring equipment in the QM system in conjunction with quality standards

An organisation certified to a quality standard such as DIN EN ISO 9001 ff. e.g. a production plant is obliged to adhere to a defined quality standard within the framework of its quality management system. To do this, it is imperative to have a measurement equipment which is working accurately. Chapter 7.1.5 "Resources for monitoring and measuring" of DIN EN ISO 9001:2015-11 states that measuring equipment must be calibrated at defined intervals and before use. The measurement devices and measurement standards needed to do this must:

- be traced back to international or national standards.
- ( Traceability to the National Standard)
- their uncertainty of measurement must be known- they must be marked with a clear identification
- the test must be documented

The ► **DAkkS calibration (DKD)** fulfils all these requirements.

### Conventional mass of weights

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

### **Counting resolution**

The counting resolution is calculated in points from the ratio of the weighing range [Max] divided by the smallest part weight. It is a statement of counting accuracy.

### D

### DAkkS = German accreditation authority

Calibration Certificate DKD/DAkkS
 See product group 18 "Calibration service"

### Data interface

To connect the balance to a printer, PC, network or a second balance. Typical interfaces are, for example, RS-232, RS-485, USB, Bluetooth, LAN, Digital I/O, DUAL, LAN etc. The interface parameters can be set using the balance. The interfaces available are stated in the model description.

### **Density determination**

One of the main areas of application for laboratory balances is determining densities, e.g. determining the specific weight of liquids and solids. To do this you will need a highly accurate precision or analytical balance and a density set. It is particularly convenient if the balance can calculate and display the density right away.

It has become apparent that by means of weigting when in the process of determining the density of liquids and solids according to the buoyancy method particularly accurate results can be obtained (Archimedes' principle). a) Density determination of liquids: By means

of measuring the buoyancy with a glass plummet with known volume immersed in the liquid to be measured

b) Density determination of solid bodies:

$$\rho = \underline{A} \cdot \rho_0$$

- $\rho$  = Density of sample
- A = Weight of sample in air
- B = Weight of sample in auxiliary liquid
- $\rho_0$  = Density of the auxiliary liquid



### Glossary

### Applications:

 a) Pre-packaged goods control, whenever a product is sold according to its volume [cm<sup>3</sup>]. This volume is calculated with weight [g] : density [g/cm<sup>3</sup>].

b) Materials analysis

### DMS = Strain gauge

An electrical resistor strip that is glued to an elastic deforming body made of aluminium. As the strain gauge is mechanically deformed its resistance value changes, allowing the measured value to be calculated.

### Draught shield

Required for balances with ► **Readout** d ≤ 1 mg, to avoid disturbing air movements.

### Dual-range balance

As the load increases, the balance switches automatically to the next largest range, for both, weighing range [Max] as well as readout [d].

### Ε

## Error limit classes for test weights according to EU directive OIML R111

For further details, see product group 17 "Test weights"

### F

### FACTORY

These options can only be carried out at KERN factory.

### FORCE = Electromagnetic force compensation



### A counterforce is created by means of a coil in a permanent magnet. This counterforce is the same as the load of the weight being measured on the scale and therefore equalising. The measured value is calculated via the change in the coil current.

### G

### GLP = Good Laboratory Practice

► ISO/GLP

### Gravitational acceleration

Gravitational force

### Gravitational force

very important influence for precise electronic balances. Due to the varying influence balances have to be ► *adjusted at the location of use*.

### Η

### HACCP

**= Hazard Analysis and Critical Control Points (HACCP)** The HACCP concept is a preventative system, which is designed to guarantee the safety of foodstuffs EC regulation 852/2004 mandates the use of the HACCP concept for all companies which are involved in production, processing and sales of foodstuffs.

### ISO 9000ff/DIN EN ISO 9000ff

Quality Management System in the form of a DIN Norm for quality assurance in a factory.

### ISO calibration/ISO certificate = factory calibration certificate

Testing measurement devices for accuracy in accordance with a procedure which is recognised, but not accredited.

### ISO/GLP record keeping



Quality Assurance Systems demands record keeping of weighing results and correct adjusting of the balance, giving details of date, time and balance identification. The easiest way to obtain this documentation is by means of a connected printer.

### Junction Box

For connection and simple corner adjustment of several load cells.

### K

### КСР

KCP is an universal communication protocol between laboratory balances, industrial scales or other measuring instruments and digital devices, such as a computer, server or process management system. Due to the universal protocol structure, one measuring instrument can be replaced by another without adapting the communication interface.

#### \_\_\_\_\_\_ Linearity/Precision

Greatest deviation of the weight displayed of a balance with regard to the value of the respective test weight in terms of plus and minus across the whole weighing range.

### Μ

### Minimum load [Min]

Lower limit of the verifiable weighing range. Is marked on the verification mark. The function of the balance is also given below the minimum load.

### Minimum sample weight

Indicates the smallest weight which can be determined, depending on the process accuracy required.

### Ν

### Newton

Newton (N) is the unit for physical force values. A Newton is the force required to accelerate a 1 kg mass at rest to a speed of 1 m/s within one second.

### Notified body

Neutral and independent, predominantly government bodies, which are formally appointed by the EC. They are engaged in the field of verification for conformity evaluations (initial verification) and type-approval test within the scope of type approvals.

### 0

### Optimisation of reference weight (when piece counting)

See product group 9 "Counting balances/ Counting systems".

### Ρ

### Percentage determination

Example: Reference weight prior to drying: 50g = balance display 100%. After drying 40g = balance display 80% absolute (dry mass) or 20% relative (humidity).

PERCENT

### Permissible ambient temperature

Measuring errors are possible if you use the balances outside the permitted specified ambient temperature range. With verified balances this is stated on the identification plate.

### PLU (Price Look Up)

This refers to a data memory in pricecomputing retail scales for the base price of sales items.

### Pre-packaging legislation (FPVO)

Ensures that pre-packed goods are filled correctly, for example, in food industry. The Weights and Measures Act governs the permissible weight and volume tolerances.

### PRE-TARE

Entering and saving a tare weight (e.g. container weight) through weighing or manual entry using the balance keypad before the actual weighing process. When you subsequently place the tare container on the balance, the balance will show zero immediately – saves time. Particularly useful e.g. for checking fill levels

### **Proof of compatibility**

This documents the verification compatibility for combinations of weighing modules such as display devices, load cells and connecting elements.

### R

### Readout [d]

Smallest readable weight increment on a digital display.

### Recalibration

Periodic checking of the precision of measurement equipment/checking equipment (e.g. balances/weights) to control accuracy, Control of measurement equipment

### Reference weight (when piece counting)

See product group 9 "Counting balances/ Counting systems".

### Reproducibility (standard deviation)

Sequenced measure of conformity in repeated weighing (e.g. balances) subject to the same conditions. Mostly 1 [d] or less. Quality feature.

### Resolution of a balance

The resolution is calculated from the weighing range [Max] divided by the readout [d], e. g. [Max] 420 g : [d] 0.001 g = 420,000 points. The resolution is a quality feature – the higher, the better.

### S

### SC-TECH = Single-Cell-Technology

► **FORCE**. The load cell consists of a single aluminium block, which gives a very high measurement quality.

### Semi-micro balance

Analytical balance with a readout [d] = 0,01 mg

### Smallest part weight when counting

The smallest piece weight, which a balance can accept for piece counting. For the relevant model, enter "g/piece" in the product data table.

Τ

### T-FORK = Tuning fork principle

A resonating body (like a tuning fork) is electromagnetically excited, causing it to oscillate. The measured value is calculated via the change in frequency corresponding to the load of the weight being measured on the scale.

### Taring, automatic ► PRE-TARE

### Taring, subtractive

The available weighing range of a balance is reduced by the value of the tare load. Example: weighing range of a balance Max 6000g, Tare (= container) 470g, available weighing range 5530g.

#### Test weight, external (previously calibration weight)

For adjusting or checking the balance accuracy ► Adjusting the weighing range. The external test weight can be DAkkS calibrated at any time, even afterwards, see product group 18 "Calibration Service".

Test weight, internal	CAL INT
Like test weight external, but installed	

in the balance and powered.

### Totalising

Various individual weighings are added automatically to aggregate, e.g. all individual weighings of a batch.

### **Traceability to the National Standard**

A pre-requisite for every perfect measurement is the validated comprehensive proof that the measuring equipment can be traced back to the international or national standards. In Germany the statutory binding standards are available from the PTB.

### Type approval for balances

Strict process to test whether a balance fulfils the verification requirements. A balance can only be verified, if it has got a type approval from a ► **notified body.** 

### U

1

SC TECH

(((**U**)))

### Uncertainty of measurement of a balance (= standard deviation)

Determined for each balance according to a precisely given test method and documented in the ► *Calibration certificate*. It depends on various factors, both, internal and external. Uncertainty of measurement increases by a rising charge of the balance, see product group 18 "Calibration Service"

### V

### Verification

Verification, in accordance with the new terminology "Conformity assessment". Only balances with ► *EC type approval* can be evaluated for conformity. These balances have an identification plate with the metrology marking **M**. The state requires assessment for conformity and this assessment serves as consumer protection. According to EU directive 2014/31/EEC balances must be officially assessed for conformity (calibrated) if they are used as follows:

- a) in commercial trade when the price of a commodity is determined by weighing.
- b) in the manufacture of pharmaceuticals in pharmacies and analysis in pharmaceutical and medical laboratories.
- c) for official purposes.
- d) in the production of prepackaging.
- e) in medical applications.

Every balance is tested by KERN and marked with a conformity mark. Its accuracy within the framework of permissible tolerances is thereby confirmed. EU verification applies to all member states of the EU.

#### Verification classes of balances

Class I – Analytical balance (precision balance), Class II – precision balance, Class III – industrial scale (commercial scale).

### Verification of a balance with adjusting program CAL EXT

The adjusting program is sealed with an official mark after the verification. Thus the verification is only valid for the specific location of use.

### Gravitational force

SHM

To be able to correctly adjust the balance to your location of use, it is necessary to advise the location of use and postcode. See individual model details for the information as to whether verification can be carried out in the factory or at the location of use.

### Verification of a balance with automatic internal adjusting CAL INT

The above restrictions in respect of the location of use do not apply, because the automatic internal adjusting works also after verification, therefore it is not sealed. In this case, verification does not depend on the location.

### Verification validity for balances

Generally 2 years for all verification classes, for control balances generally 1 year, after expiry the balance has to be re-verified.

### Verification value [e]

Measure of the verification tolerance, depending on balance, mostly between 1 [d] and 10 [d] ► *Readout* 

### W

### Weighing range [Max]

is the working range of the balance. The balance can be loaded up to the specified upper limit.



### Sales conditions

All prices are valid as of January 1st 2022 until a new version of the KERN catalogue is released. In Europe, all prices do not include the applicable V.A.T.

At KERN there is no minimum order value. For orders less than € 15.00 there is no re-sale discount available.

**Delivery Conditions:** we supply ex works Balingen, e.g. the transport costs are invoiced. With our contract logistics partners we always offer you shipping at a good rate. When shipping to islands or other more distant areas, or areas which are difficult to access, the transport costs may possibly be higher, please ask for details. Any goods supplied remain KERN's property until complete payment for the goods sold has been received.



DAYS

Delivery is usually via courier service.

When you see this symbol by truck,

please ask for prices.

### Extract from general terms and conditions:

Court of jurisdiction/Legal domicile: 72336 Balingen, Germany;

Commercial register N°: HRB 400865, AG Stuttgart;

Managing director: Albert Sauter

For the full Terms and Conditions, please refer to the website.

www.kern-sohn.com/en/kern/agbs.html

**Price changes and product changes** are likely in individual cases, due to product modifications as well as error.

**Sale or return:** within 14 days of purchase. Not valid for order-specific adaptations such as special productions, cable extensions, special weights, etc. or test services such as calibration, verification, etc. Depending on the time and effort involved, there may be processing and storage costs, please ask for details.**Warranty:** 

 $\cdot$  3 years for products with

- list price ≥ € 400.00
- $\cdot$  2 years for components as well as products with list price <  $\in$  400.00
- · 1 year for pallet truck scales

Does not apply to consumables such as batteries, rechargeable battery packs, etc.

Balances in areas regulated by law (
 Verification)
must comply with the commercial error limits
during the period of validity for verification
 - these are usually double the verification
 permissible error limits. If this period of validity
for verification expires, then reverification
 must be carried out. If, in order to pass the
 verification, it should be necessary to adjust
 the balance to comply with the verification
 permissible error limits, then this does not
 constitute a warranty claim.



**KERN DirectCash:** The quick, secure COD procedure for protection against non-payment. With the KERN DirectCash COD system, you can safely deliver orders to end customers with unknown credit rating, with no risk of non-payment. Please request further details on this procedure.

### **Hire Purchase**

Financing is available using KERN hire purchase – easy and convenient. Hire Purchase gives you the option of purchasing any product from our range against a simple monthly installment. The product value is financed over the period of the agreement. On payment of the last installment, the ownership of the contract item automatically transfers from the contractor to the contractee. The Hire Purchase Agreement can – if you so choose – be set for a period of between one and five years. This package includes the transfer of items as well as the guarantee for the entire transfer period.

Compared with buying the product, KERN hire purchase offers the advantage that the initial financial investment is largely unnecessary. This is particularly relevant when purchasing a number of products, for example when refitting a laboratory, a company department or a hospital ward. In addition the monthly installments constitute a direct cost and the item does not have to be capitalised by the purchaser.

### After-Sales-Service

### **Repair service**

Within 1 week at our plant in Balingen, transportation costs are additional. In urgent cases, if requested by customer, a replacement device will be provided until all repairs are completed; please ask.

### Price reduction for a new device

If repair costs exceed the current value of the defective device, a new device will be offered for a discount price. This offer is valid only up to 2 years after warranty expiration.

#### Spare parts service

Usually within 48 hours, transportation costs are additional.



### KERN catalogues, brochures, branch prospectuses – your own personalised marketing tools

This catalogue and branch prospectuses are available free of charge. A neutral version of the catalogue, without the KERN address imprint, is also available free of charge for your marketing activities, larger quantities on request.

On demand, your company logo and address can be printed on the back of the KERN catalogue free of charge, larger quantities on request. In this way you have got your own individual marketing tool.

The KERN catalogue and branch prospectuses are available in the following languages: DE, EN, FR, IT, ES.

For further details, see page 2.

### Important notice

### Explosion hazard or humidity

Our balances are not suitable for rooms with a risk of explosion. Our models are also not suitable for rooms with a high level of air humidity (condensing). Please observe the applicable electrical regulations.

### Earth's gravitational force

Electronic balances are subject to location regulations due to the earth's gravitational force. If location of use is changed, reverification and recalibration of the electronic balance is needed.

See the glossary, page 215 ► Adjusting

