

ANALYTICAL BALANCES



2017

PROFESSIONAL
MEASURING

KERN Pictograms

	Internal adjusting: Quick setting up of the balance's accuracy with internal adjusting weight (motordriven).		Piece counting: Reference quantities selectable. Display can be switched from piece to weight.		Rechargeable battery pack: Rechargeable set.
	Adjusting program CAL: For quick setting up of the balance's accuracy. External adjusting weight required.		Recipe level A: Separate memory for the weight of the tare container and the recipe ingredients (net total).		Universal mains adapter: with universal input and optional input socket adapters for A) EU, GB B) EU, GB, CH, USA C) EU, GB, CH, USA, AUS
	Memory: Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.		Recipe level B: Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display.		Mains adapter: 230V/50Hz in standard version for EU. On request GB, USA or AUS version available.
	Alibi memory: Electronic archiving of weighing results, complying with the 2009/23/EC standard. For details see page 199		Recipe level C: Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display, multiplier function, adjustment of recipe when dosages are exceeded or barcode recognition.		Power supply: Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, USA or AUS on request.
	Data interface RS-232: To connect the balance to a printer, PC or network.		Totalising level A: The weights of similar items can be added together and the total can be printed out.		Weighing principle: Strain gauges Electrical resistor on an elastic deforming body.
	RS-485 data interface: To connect the balance to a printer, PC or other peripherals. High tolerance against electromagnetic disturbance.		Percentage determination: Determining the deviation in % from the target value (100 %).		Weighing principle: Tuning fork A resonating body is electromagnetically excited, causing it to oscillate.
	USB data interface: To connect the balance to a printer, PC or other peripherals.		Weighing units: Can be switched to e.g. nonmetric units at the touch of a key. See balance model. Please refer to KERN's website for more details.		Weighing principle: Electromagnetic force compensation Coil inside a permanent magnet. For the most accurate weighings.
	Bluetooth* data interface: To transfer data from the balance to a printer, PC or other peripherals.		Weighing with tolerance range: Upper and lower limiting values can be programmed individually for e.g. dosing, sorting and portioning		Weighing principle: Single cell technology Advanced version of the force compensation principle with the highest level of precision.
	WLAN data interface: To transfer data from the balance to a printer, PC or other peripherals.		Hold function: (Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average value.		Verification possible: The time required for verification is specified in the pictogram.
	Control outputs (optocoupler, digital I/O): To connect relays, signal lamps, valves, etc.		Protection against dust and water splashes IPxx: The type of protection is shown in the pictogram. For details see page 56.		DAKkS calibration possible (DKD): The time required for DAKkS calibration is shown in days in the pictogram.
	Interface for second balance: For direct connection of a second balance.		ATEX explosion protection: Suitable for use in hazardous industrial environments, in which there is explosion danger. The ATEX marking is specified for each device.		Package shipment: The time required for internal shipping preparations is shown in days in the pictogram.
	Network interface: For connecting the scale to an Ethernet network. With KERN products you can use a universal RS-232/LAN converter. See page 166		Stainless steel: The balance is protected against corrosion.		Pallet shipment: The time required for internal shipping preparations is shown in days in the pictogram.
	Wireless data transfer: between the weighing unit and the evaluation unit using an integrated radio module.		Suspended weighing: Load support with hook on the underside of the balance.		Warranty: The warranty period is shown in the pictogram.
	GLP/ISO log: The balance displays the weight, date and time, regardless of a printer connection.		Battery operation: Ready for battery operation. The battery type is specified for each device.		
	GLP/ISO log: With weight, date and time. Only with KERN printers, see "Accessories", see page 163.				



Balances & Test service catalogue

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



Medical scales catalogue

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



Microscopes & refractometers catalogue

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



SAUTER measuring equipment catalogue

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



DAkkS calibration service brochure

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

Your advantages

fast

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

reliable


- 3 years warranty for balances over € 400,-
- Precision in weighing technology for more than 170 years


competent

- DAkkS accreditation DIN EN ISO/IEC 17025
- Certified QM system DIN EN ISO 9001:2008
- Authorisation for initial verification by the manufacturer 2014/31/EU
- Medical certifications DIN EN ISO 13485 and 93/42/EEC


versatile

- One-stop shopping: from pocket balances through to floor scales – everything from one supplier
- Find the product you want at lightning speed with the “Balance Quick-Finder” at www.kern-sohn.com


 **Order hotline**
+49 [0] 7433 9933-0


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 **Calibration hotline**
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 **Our team of consultants will assist you**
from Monday to Friday
from 8:00 am to 6:00 pm

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





Analytical balances

Quick-Finder Analytical balances

Read-out [d]	Weighing range [Max]	Model KERN	Price excl. of VAT ex works €	Page	DAYS	M	CAL INT	CAL EXT	MEMORY	RS 232	LAN	RECIPE
0,01 mg	100 g	AET 100-5AM	6500,-	37	21		●			●		
0,01 mg	101 g	ABT 100-5NM	1980,-	36	1	○	●			●		●
0,01 0,1 mg	42 120 g	ABT 120-5DNM	2120,-	36	1	○	●			●		●
0,01 0,1 mg	82 220 g	ABT 220-5DNM	2250,-	36	1	○	●			●		●
0,01 0,1 mg	82 220 g	AEJ 200-5CM	1950,-	35	1	○	●		●	●		●
0,01 0,1 mg	82 220 g	AET 200-5DAM	7400,-	37	21		●		●	●	○	●
0,1 mg	82 g	ABJ 80-4NM	1050,-	34	1	○	●			○		●
0,1 mg	82 g	ABS 80-4N	970,-	34	1			●		○		●
0,1 mg	120 g	ABS 120-4N	1030,-	34	1			●		○		●
0,1 mg	120 g	ABJ 120-4NM	1080,-	34	1	○	●			○		●
0,1 mg	120 g	ABT 120-4NM	1490,-	36	1	○	●			●		●
0,1 mg	160 g	ALJ 160-4A	1030,-	33	1		●			●		●
0,1 mg	160 g	ALJ 160-4AM	1050,-	33	1	○	●			●		●
0,1 mg	160 g	ALS 160-4A	930,-	33	1			●		●		●
0,1 mg	160 g	AES 100-4C	1070,-	35	1			●	●	●		●
0,1 mg	160 g	AEJ 100-4CM	1150,-	35	1	○	●		●	●		●
0,1 mg	210 g	ADB 200-4	910,-	32	1			●		●		●
0,1 mg	220 g	ABJ 220-4NM	1170,-	34	1	○	●			○		●
0,1 mg	220 g	ABS 220-4N	1070,-	34	1			●		○		●
0,1 mg	220 g	AES 200-4C	1120,-	35	1			●	●	●		●
0,1 mg	220 g	AEJ 200-4CM	1200,-	35	1	○	●		●	●		●
0,1 mg	220 g	ABT 220-4NM	1770,-	36	1	○	●			●		●
0,1 mg	220 g	AET 200-4NM	2800,-	37	21		●		●	●		●
0,1 mg	310 g	ALJ 310-4A	1190,-	33	1		●			●		●
0,1 mg	250 g	ALJ 250-4A	1060,-	33	1		●			●		●
0,1 mg	250 g	ALJ 250-4AM	1090,-	33	1	○	●			●		●
0,1 mg	250 g	ALS 250-4A	980,-	33	1			●		●		●
0,1 mg	320 g	ABS 320-4N	1240,-	34	1			●		○		●
0,1 mg	320 g	ABJ 320-4NM	1340,-	34	1	○	●			○		●
0,1 mg	320 g	ABT 320-4NM	1980,-	36	1	○	●			●		●
0,1 mg	510 g	ALJ 500-4A	1950,-	33	1		●			●		●
0,1 mg	510 g	AET 500-4	6100,-	37	21		●		●	●		●

● = standard ○ = option

Your product specialist's recommendation:

-  **Large glass draught shield with 3 sliding doors**
-  **Ergonomically optimised keypad for left and righthanded users**
-  **Large weighing space**
-  **Large weighing ranges at a top price**



Christian D'Onofrio
Product specialist Analytical balances

Tel. +49 [0] 7433 9933-147
Fax +49 [0] 7433 9933-29147
christian.donofrio@kern-sohn.com



HIGH-LIGHT

from €
930,-
▶ page 33

KERN ALS-A/ALJ-A



03



The price leader in analytical balances

Features Technical data Accessories

- Optimised price performance ratio, ideal for laboratories, universities, schools
- **Large glass draught shield** with 3 sliding doors for easy access to the items being weighed
- **The wired display device** can be adjusted flexibly to suit the ergonomic requirements of the user or the workplace. In addition, it eliminates any heat effect on the weighing system from the display device
- **Ergonomically optimised keypad** for left and righthanded users
- **Percentage determination:** makes it possible to store a given weight value (100 %) and to determine deviations from this target value
- **Adjusting program CAL** for quick setting of the balance accuracy using an external test weight

- Large backlit LCD display, digit height 19,6 mm
- Dimensions weighing surface, stainless steel, ø 90 mm
- Overall dimensions W×D×H 305×475×295 mm
- Weighing space W×D×H 215×205×245 mm
- Dimensions of display device W×D×H 190×105×50 mm
- External mains adapter standard, standard EURO/AUS/UK
- Cable length of display device approx. 0,5 m
- Net weight approx. 10 kg
- Permissible ambient temperature 10 °C/30 °C

- **Protective working cover**, can be re-ordered, scope of delivery: 5 items, KERN ADB-A01S05, **€ 30,-**
- **1 Ioniser** to neutralise electrostatic charge, KERN YBI-01A, **€ 930,-**
- **2 Precious stones plate**, aluminium with practical spout, W×D×H 83×66×23 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,-**
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD OPTION

CAL EXT	RS 232	GLP	PCS	PERCENT	UNIT	MULTI	FORCE	1 DAY	3 YEARS WARRANTY	DAkkS +3 DAYS

Model	Weighing range	Readout	Reproducibility	Linearity	Price excl. of VAT ex works €	Option DAkkS Calibr. Certificate	
						DKD KERN	€
KERN ADB 200-4	[Max] g 210	[d] mg 0,1	mg 0,2	mg ± 0,4	910,-	963-101	138,-



Range of analytical balances, with large weighing ranges, also with EC type approval [M]

Features

- **1** KERN ALJ-A/-AM: **Automatic internal adjustment** in the case of a change in temperature 1,2 °C or timecontrolled every 3 h, guarantees high degree of accuracy and makes the balance independent of its location of use
- **2** KERN ALS-A: **Adjusting program CAL** for quick setting of the balance accuracy using an external test weight
- **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
- **Percentage determination**: makes it possible to store a given weight value (100 %) and to determine deviations from this target value

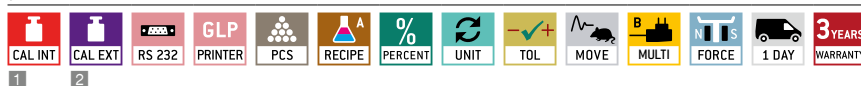
Technical data

- Backlit LCD display, digit height 17 mm
- Dimensions weighing surface, stainless steel, ø 80 mm
- Overall dimensions W×D×H 210×340×330 mm (incl. draught shield)
- Weighing space W×D×H 160×140×205 mm
- Net weight approx. 5,7 kg
- Permissible ambient temperature KERN ALS-A/ALJ-A: 5°C/35°C KERN ALJ-AM: 15°C/30°C

Accessories

- **Protective working cover**, scope of delivery: 5 items, KERN ALJ-A01S05, **€ 40,-**
- **Protective dust cover**, KERN ABS-A08, **€ 30,-**
- **3 Set for density determination** of liquids and solids with density $\leq/\geq 1$, the density is indicated directly on the display, KERN YDB-03, **€ 390,-**
- **4 Ioniser** to neutralise electrostatic charge, KERN YBI-01A, **€ 930,-**
- **5 Weighing table** to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, **€ 900,-**
- **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,-**
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD



OPTION



FACTORY



Model	Weighing range [Max] g	Readout [d] mg	Verification value [e] mg	Minimal load [Min] mg	Reproducibility mg	Linearity mg	Price € excl. of VAT ex works €	Options			
								Verification		DAkkS Calibr. Certificate	
KERN								MD KERN	€	DKD KERN	€
ALS 160-4A	160	0,1	-	-	0,1	± 0,3	930,-	-	-	963-101	138,-
ALS 250-4A	250	0,1	-	-	0,1	± 0,3	980,-	-	-	963-101	138,-

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 160-4A	160	0,1	-	-	0,1	± 0,3	1030,-	-	-	963-101	138,-
ALJ 160-4AM	160	0,1	1	10	0,2	± 0,3	1050,-	965-201	110,-	963-101	138,-
ALJ 250-4A	250	0,1	-	-	0,1	± 0,3	1060,-	-	-	963-101	138,-
ALJ 250-4AM	250	0,1	1	10	0,2	± 0,3	1090,-	965-201	110,-	963-101	138,-
ALJ 310-4A	310	0,1	-	-	0,1	± 0,3	1190,-	-	-	963-101	138,-
ALJ 500-4A	510	0,1	-	-	0,2	± 0,4	1950,-	-	-	963-101	138,-



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

Features

- 1 **ABJ-NM: 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
- 2 **ABS-N: Adjusting program CAL** for quick setting of the balance accuracy using an external test weight
- 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
- Automatic data output to the PC/printer** each time the balance is steady

- Identification number:** 4 digits, printed on calibration protocol freely programmable
- ABJ-NM has OIML certification

Technical data

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

Accessories

- Protective working cover**, standard, can be re-ordered, scope of delivery: 5 items, KERN ACS-A02S05, € 60,-

- 3 **Data interface RS-232**, interface cable included, approx. 1,5 m, KERN ACS-A01, € 75,-
- 4 **Set for density determination** of liquids and solids with density ≤/≥ 1, the density is indicated directly on the display, KERN YDB-03, € 390,-
- 5 **Ioniser** to neutralise electrostatic charge, KERN YBI-01A, € 930,-
- 6 **Weighing table** to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, € 900,-
- 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,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

- 7 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 sec under laboratory conditions
 - Shock proof construction**
 - High corner load performance**

STANDARD: CAL INT, CAL EXT, PRINTER, PCS, RECIPE, PERCENT, UNIT, TOL, MULTI, SC TECH, 1 DAY, 3 YEARS WARRANTY

OPTION: RS 232, DAkkS +3 DAYS

FACTORY: +3 DAYS, ABJ-NM

Model	Weighing range [Max] g	Readout [d] mg	Verification value [e] mg	Minimal load [Min] mg	Reproducibility mg	Linearity mg	Price € excl. of VAT ex works €	Options			
								Verification		DAkkS Calibr. Certificate	
KERN								MD KERN	€	DKD KERN	€
ABS 80-4N	82	0,1	-	-	0,2	± 0,3	970,-	-	-	963-101	138,-
ABS 120-4N	120	0,1	-	-	0,2	± 0,3	1030,-	-	-	963-101	138,-
ABS 220-4N	220	0,1	-	-	0,2	± 0,3	1070,-	-	-	963-101	138,-
ABS 320-4N	320	0,1	-	-	0,2	± 0,3	1240,-	-	-	963-101	138,-
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.											
ABJ 80-4NM	82	0,1	1	10	0,2	± 0,3	1050,-	965-201	110,-	963-101	138,-
ABJ 120-4NM	120	0,1	1	10	0,2	± 0,3	1080,-	965-201	110,-	963-101	138,-
ABJ 220-4NM	220	0,1	1	10	0,2	± 0,3	1170,-	965-201	110,-	963-101	138,-
ABJ 320-4NM	320	0,1	1	10	0,2	± 0,3	1340,-	965-201	110,-	963-101	138,-



Compact high-end analytical balance with useful pipette calibration program and alibi memory

Features

- **1** KERN AEJ-CM: **Automatic internal adjustment** in the case of a change in temperature 3 °C or timecontrolled every 3 h, guarantees high degree of accuracy and makes the balance independent of its location of use
- **2** **Intuitive pipette calibration function** to ensure data integrity and to minimise the risks in the daily work with your pipettes
- Higher weighing speed by switching off the last digit
- **Large glass draught shield** with 3 sliding doors for easy access to the items being weighed.
- **Dispensing mode:** By pressing one key you can set all relevant parameters for dispensing
- KERN AEJ-CM: **Alibi memory:** electronic archiving of weighing results
- **Note:** For weighings where verification is mandatory, and which are to be analysed

and processed by a PC, the legislative body requires electronic archiving using a verifiable, non-manipulatable data memory

- **Internal memory** for up to 999 weighing results, 1000 items or recipe ingredients, 100 container weights, 100 users

Technical data

- Large backlit LCD display, digit height 17 mm
- Dimensions weighing surface, stainless steel, ø 85 mm
- Overall dimensions W×D×H 206×335×330 mm
- Weighing space W×D×H 168×160×225 mm
- Net weight approx. 5,0 kg
- Permissible ambient temperature
KERN AES: 18 °C/30 °C
KERN AEJ: 10 °C/40 °C

Accessories

- **Protective working cover**, standard, can be re-ordered, scope of delivery: 5 items, KERN ALS-A02S05, **€ 42,-**
- **3** **Set for density determination** of liquids and solids with density $\leq/\geq 1$, the density is indicated directly on the display, KERN YDB-03, **€ 390,-**
- **4** **Ioniser** to neutralise electrostatic charge, KERN YBI-01A, **€ 930,-**
- **5** **Weighing table** to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, **€ 900,-**
- KERN AEJ-CM: **Alibi memory software** for viewing and saving data from the alibi memory onto a PC connected to the system, KERN PET-A16, **€ 300,-**
- **WLAN interface** for wireless connection of the balance to networks and WLAN capable devices, such as tablets, laptops or smartphones, KERN PLJ-A06, **€ 135,-**
- **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,-**
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD



OPTION

FACTORY



Model	Weighing range [Max] g	Readout [d] mg	Verification value [e] mg	Minimal load [Min] mg	Reproducibility mg	Linearity mg	Price € excl. of VAT ex works €	Options			
								Verification		DAkkS Calibr. Certificate	
KERN								MO KERN	€	DKD KERN	€
AES 100-4C	160	0,1	-	-	0,2	± 0,2	1070,-	-	-	963-101	138,-
AES 200-4C	220	0,1	-	-	0,2	± 0,2	1120,-	-	-	963-101	138,-
Note: For applications that require verification, please order verification 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.											
AEJ 200-5CM	82 220	0,01 0,1	1 1	1	0,04 0,1	± 0,1 0,2	1950,-	965-201	110,-	963-101	138,-
AEJ 100-4CM	160	0,1	1	10	0,2	± 0,3	1150,-	965-201	110,-	963-101	138,-
AEJ 200-4CM	220	0,1	1	10	0,2	± 0,3	1200,-	965-201	110,-	963-101	138,-

Price reduction



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
- **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

Technical data

- Large LCD display, digit height 14 mm
- Dimensions weighing surface, stainless steel, ø 80 mm
- Overall dimensions 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 °C/30 °C

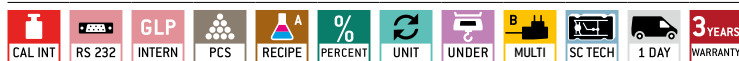
Accessories

- **Protective working cover**, can be re-ordered, scope of delivery: 5 items, KERN ABT-A02S05, € 50,-
- **Set for density determination** of liquids and solids with density $\leq/\geq 1$, the density is indicated directly on the display, KERN YDB-03, € 390,-

- **Ioniser** to neutralise electrostatic charge, KERN YBI-01A, € 930,-
- **Weighing table** to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, € 900,-
- **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,-
- Further details, plenty of further accessories and suitable printers see *Accessories*

- 4 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 sec under laboratory conditions
 - **Shock proof construction**
 - **High corner load performance**

STANDARD



OPTION



FACTORY



Model	Weighing range [Max] g	Readout [d] mg	Verification value [e] mg	Minimal load [Min] mg	Reproducibility mg	Linearity mg	Price € excl. of VAT ex works €	Options					
								Verification		DAkkS Calibr. Certificate			
								M	€	DKD	€		
KERN													
ABT 120-4NM	120	0,1	1	10	0,1	± 0,2	1490,-	965-201	110,-	963-101	138,-		
ABT 220-4NM	220	0,1	1	10	0,1	± 0,2	1770,-	965-201	110,-	963-101	138,-		
ABT 320-4NM	320	0,1	1	10	0,1	± 0,3	1980,-	965-201	110,-	963-101	138,-		
ABT 100-5NM	101	0,01	1	1	0,05	± 0,15	1980,-	965-201	110,-	963-101	138,-		
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.													
Dual-range balance switches automatically to the next largest weighing range [Max] and readout [d]													
ABT 120-5DNM	42 120	0,01 0,1	1	1	0,02 0,1	± 0,05 0,2	2170,-	965-201	110,-	963-101	138,-		
ABT 220-5DNM	82 220	0,01 0,1	1	1	0,05 0,1	± 0,1 0,2	2370,-	965-201	110,-	963-101	138,-		



Premium touchscreen analytical balance with the complete range of functions for demanding processes

Features

- **Software supported pipette calibration in accordance with ISO 8655:** The user is guided through the pipette calibration procedure step by step, in accordance with the requirements of the norm. This helps to ensure that the pipetting volumes are correct and minimises the risks in daily pipetting work
- **Convenient recipe-weighing:** complete recipes with all recipe ingredients and associated target values, names, tolerances, tare weights etc. can be stored. If one recipe ingredient is overweight, then the practical recipe adjustment function for when dosages are exceeded automatically calculates the new target weights of the other ingredients
- **Multiplier function:** recipes and their ingredients can be multiplied at will at the press of a button, which is ideal for the production of larger containers, bulk packs etc.
- **Electronic level indicator** continuously checks the position of the balance,

sounds an alarm when the device is out of balance and gives visual instructions on how to correct the situation

Technical data

- Large backlit LCD touch display, digit height 21 mm, screen diagonal 5,7" (115x86 mm)
- Dimensions weighing surface, stainless steel, \varnothing 85 mm
- Dimensions of display device WxDxH 215x156x71 mm
- Overall dimensions WxDxH [d] = 0,01 mg: 200x394x929 mm [d] = 0,1 mg: 254x270x350 mm
- Weighing space WxDxH 168x160x227 mm
- Dimensions of display device WxDxH 215x156x71 mm
- Permissible ambient temperature 18 °C/30 °C

Accessories

- **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,-
- **Suitable printers** and further, extensive accessories see internet

Modes

- ① Weighing
- ② Determination stock level
- ③ Checkweighing
- ④ Dispensing
- ⑤ Percentage determination
- ⑦ Animal weighing
- ⑧ Recipe weighing
- ⑨ Statistics
- ⑩ Pipette calibration
- ⑪ Differential weighing
- ⑫ Statistical Quality Control (SQC)

Functions

- Capacity display with ① - ⑫
- Dispensing aid (-/+), with ④, ⑤
- Net/gross display, permanent, with ① - ⑫
- Variable reference quantity, with ②
- Tare deduction automatic, with ① - ⑫
- Entering of item or batch description, operator etc., with ① - ⑫
- Freely programmable weighing unit, e.g. display direct in special units such as length of thread g/m, grammage g/m², or similar, with ① - ⑫
- Date/time, with ① - ⑫
- Statistical function, as stand-alone application
- GLP printout, with ① - ⑫
- Individual printout configuration ① - ⑫

Note: Your KERN product specialist Ingo Schlaich, Tel. +49 [0]7433 9933-158 will be happy to help with all questions of detail

STANDARD



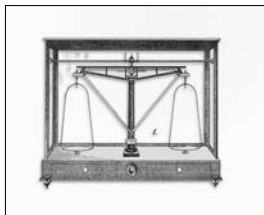
OPTION

Model	Weighing range [Max]	Readout	Verification value [e]	Minimal load [Min]	Reproducibility	Linearity	Price € excl. of VAT ex works €	Options			
								Verification		DAkKS Calibr. Certificate	
KERN	g	[d] mg	[e] mg	mg	mg	mg		MD KERN	€	DKD KERN	€
AET 500-4	510	0,1	-	-	0,2	± 0,5	6 100,-	-	-	963-101	138,-
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.											
Dual-range balance switches automatically to the next largest weighing range [Max] and readout [d]											
AET 200-5DAM	82 220	0,01 0,1	1	1	0,04 0,1	± 0,1 0,2	7 400,-	-	-	963-101	138,-
AET 100-5AM	100	0,01	1	1	0,05	± 0,1	6 500,-	-	-	963-101	138,-
AET 200-4NM	220	0,1	1	10	0,2	± 0,3	2 800,-	965-201	110,-	963-101	138,-

ONLY WHILE STOCKS LAST !

Tradition and innovation for more than 170 years

An independent family business, KERN since already 7 generations is synonymous with quality and reliability in customer service.



► 1844

KERN is founded – precision balances are produced



► 1863

A proud Gottlieb Kern with his staff



► 1880

Pharmaceutical balance with Aesculap



► 1923

Inflation – KERN wages are paid with self printed currency



► 1980

The electronic balance ousts mechanical devices



► 1994

Accredited DKD laboratory (ISO 17025)



► 2000

New premises in Balingen



► 2002

Existing QM system certification in accordance with DIN EN ISO 9001:2000 standards



► 2007

Approval for the manufacture of medical products (DIN EN 13485 and 93/42/EEC)



► 2008

Authorisation for initial verification by the manufacturer (2009/23/EU)



► 2009

Approval for the manufacture and sale of height rods (DIN EN 13485 and 93/42/EEC)



► 2012

Verification point for non-automatic balances and test weights.

New customer portal www.kern-sohn.com goes live



► 2014

Expansion of the product range to include optical instruments (microscopes and refractometers)



► 2015

Inauguration of Ziegelei 2.0 with computer-controlled high-bay warehouse

KERN & SOHN GmbH
Balances, Test weights, DAkkS Calibration laboratory
Ziegelei 1
72336 Balingen
Germany

Tel. +49 [0] 7433 9933-0
Fax +49 [0] 7433 9933-149

info@kern-sohn.com
www.kern-sohn.com

