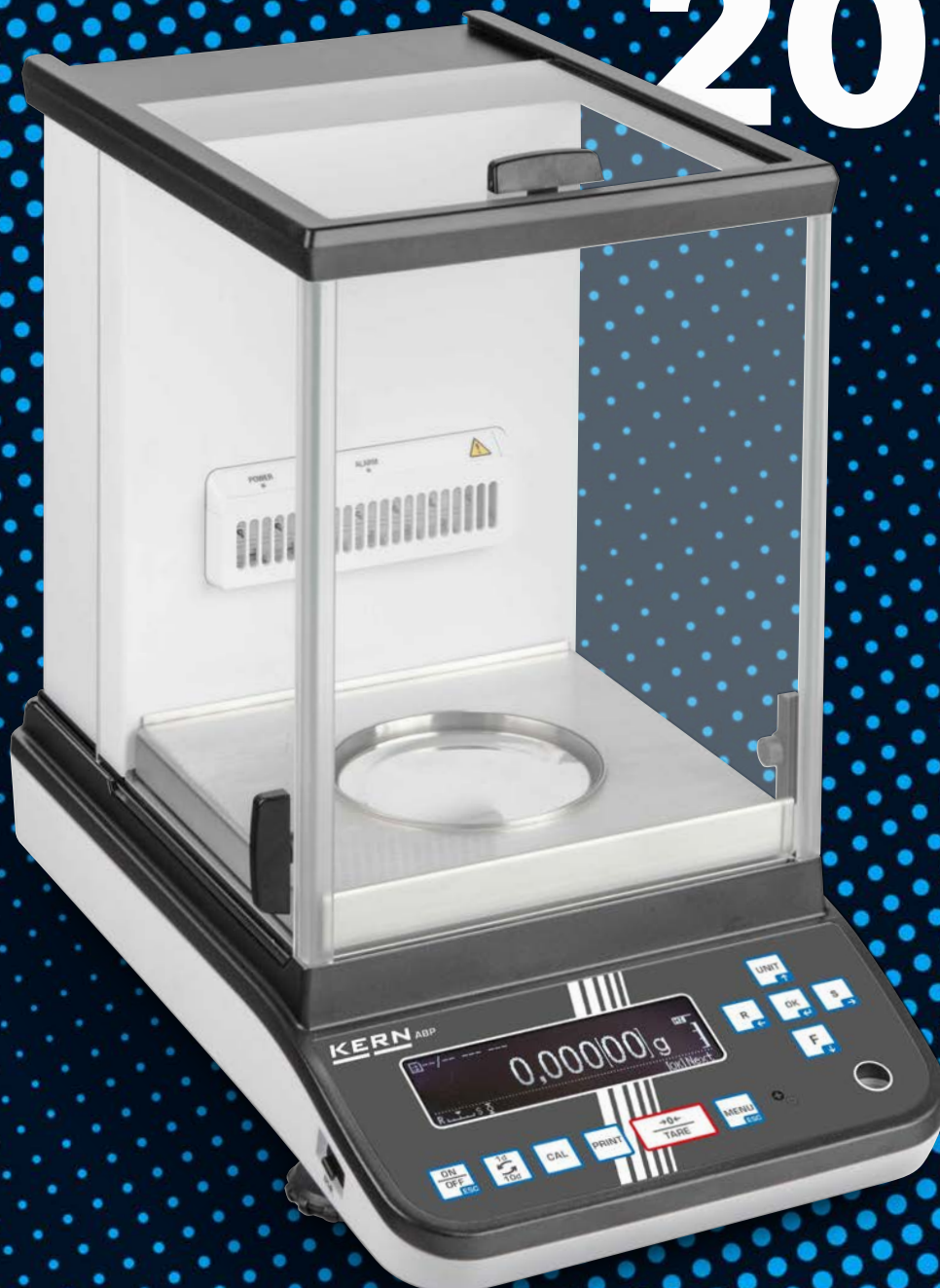


ANALYTICAL BALANCES






































PROFESSIONAL MEASURING

2021



KERN Pictograms

 Internal adjusting: Quick setting up of the balance's accuracy with internal adjusting weight (motordriven)	 KERN Communication Protocol (KCP): It is a standardized interface command set for KERN balances and other instruments, which allows retrieving and controlling all relevant parameters and functions of the device. KERN devices featuring KCP are thus easily integrated with computers, industrial controllers and other digital systems	 Battery operation: Ready for battery operation. The battery type is specified for each device
 Adjusting program CAL: For quick setting up of the balance's accuracy. External adjusting weight required	 GLP/ISO log: The balance displays serial number, user ID, weight, date and time, regardless of a printer connection	 Rechargeable battery pack: Rechargeable set
 Easy Touch: Suitable for the connection, data transmission and control through PC, tablet or smartphone. For details see page 131	 GLP/ISO log: With weight, date and time. Only with KERN printers, see page 170–172	 Universal mains adapter: with universal input and optional input socket adapters for A) EU, CH, GB B) EU, CH, GB, USA C) EU, CH, GB, USA, AUS
 Memory: Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.	 GLP/ISO log: With weight, date and time. Only with KERN printers, see page 170–172	 Mains adapter: 230V/50Hz in standard version for EU, CH. On request GB, USA or AUS version available
 Alibi memory: Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard. For details see page 223	 Piece counting: Reference quantities selectable. Display can be switched from piece to weight	 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	 Recipe level A: The weights of the recipe ingredients can be added together and the total weight of the recipe 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. Suitable for data transfer over large distances. Network in bus topology is possible	 Recipe level B: Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display	 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	 Totalising level A: The weights of similar items can be added together and the total can be printed out	 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	 Percentage determination: Determining the deviation in % from the target value (100 %)	 Weighing principle: Single cell technology: Advanced version of the force compensation principle with the highest level of precision
 WiFi data interface: To transfer data from 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	 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.	 Weighing with tolerance range: (Checkweighing) Upper and lower limiting can be programmed individually, e.g. for sorting and dosing. The process is supported by an audible or visual signal, see the relevant model	 DAKkS calibration possible (DKD): The time required for DAKkS calibration is shown in days in the pictogram
 Analogue interface: to connect a suitable peripheral device for analogue processing of the measurements	 Hold function: (Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average value	 Factory calibration (ISO): The time required for Factory calibration is shown in days in the pictogram
 Interface for second balance: For direct connection of a second balance	 Protection against dust and water splashes IPxx: The type of protection is shown in the pictogram. For details see page 58	 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	 Suspended weighing: Load support with hook on the underside of the balance	 Pallet shipment: The time required for internal shipping preparations is shown in days in the pictogram

KERN – measuring technology and testing services from a single source



Balances & Test service catalogue

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



Medical scales catalogue

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



Microscopes & refractometers catalogue

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



SAUTER measuring equipment catalogue

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



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

reliable

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

competent

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

versatile

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



Order hotline
+49 7433 9933-0



Online Shop
www.kern-sohn.com



Service hotline
+49 7433 9933-199



E-mail order
info@kern-sohn.com



Calibration hotline
+49 7433 9933-196



Fax order
+49 7433 9933-146



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



www.kern-sohn.com

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

04

Analytical balances

Quick-Finder Analytical balances

Readability [d] mg	Weighing capacity [Max] g	Model KERN	Price excl. of VAT ex works €	Page	DAYS	M	CAL INT	CAL EXT	RS 232	RECIPE	For an explanation on the pictos, see front flap						
0,01		101	ABT 100-5NM	1900,-	42	1	○	●			●						
0,01	0,1	42	120	ABT 120-5DNM	2000,-	42	1	○	●			●					
0,01	0,1	52	120	ABP 100-5DM	2660,-	44	1	○	●			●					
0,01	0,1	82	220	ALJ 200-5DA	1690,-	38	1		●			●					
0,01	0,1	82	220	ABT 220-5DNM	2060,-	42	1	○	●			●					
0,01	0,1	102	220	ABP 200-5DM	2850,-	44	1	○	●			●					
0,1		82		ABS 80-4N	920,-	40	1			●		○					
0,1		82		ABJ 80-4NM	1030,-	40	1		●			○					
0,1		82		ACS 80-4	1050,-	40	1			●		○					
0,1		82		ACJ 80-4M	1160,-	40	1	○	●			●					
0,1		120		ADB 600-C3	610,-	37	1			●		○					
0,1		120		ADB 100-4	620,-	37	1			●		○					
0,1		120		ADJ 600-C3	740,-	37	1		●			○					
0,1		120		ADJ 100-4	750,-	37	1		●			○					
0,1		120		ABS 120-4N	1000,-	40	1			●		○					
0,1		120		ABJ 120-4NM	1050,-	40	1		●			○					
0,1		120		ACS 100-4	1130,-	40	1			●		○					
0,1		120		ACJ 100-4M	1180,-	40	1	○	●			●					
0,1		120		ABT 120-4NM	1450,-	42	1	○	●			●					
0,1		120		ABP 100-4M	1840,-	44	1	○	●			●					
0,1		160		ALS 160-4A	960,-	38	1			●		○					
0,1		160		ALJ 160-4A	1060,-	38	1			●		○					
0,1		160		ALJ 160-4AM	1130,-	38	1	○	●			●					
0,1		210		ADB 200-4	640,-	37	1			●		○					
0,1		210		ADJ 200-4	790,-	37	1		●			○					
0,1		220		ABS 220-4N	1070,-	40	1			●		○					
0,1		220		ABJ 220-4NM	1150,-	40	1		●			○					
0,1		220		ACS 200-4	1190,-	40	1			●		○					
0,1		220		ACJ 200-4M	1280,-	40	1	○	●			●					
0,1		220		ABT 220-4NM	1760,-	42	1	○	●			●					
0,1		220		ABP 200-4M	2220,-	44	1	○	●			●					
0,1		250		ALS 250-4A	980,-	38	1			●		○					
0,1		250		ALJ 250-4A	1060,-	38	1			●		○					
0,1		250		ALJ 250-4AM	1130,-	38	1	○	●			●					
0,1		310		ALJ 310-4A	1100,-	38	1			●		○					
0,1		320		ABS 320-4N	1200,-	40	1			●		○					
0,1		320		ABJ 320-4NM	1320,-	40	1		●			○					
0,1		320		ACS 300-4	1350,-	40	1			●		○					
0,1		320		ACJ 300-4M	1470,-	40	1	○	●			●					
0,1		320		ABT 320-4NM	1960,-	42	1	○	●			●					
0,1		320		ABP 300-4M	2470,-	44	1	○	●			●					
0,1		510		ALJ 500-4A	1860,-	38	1			●		○					

News 2021

◆ = Carat balances

● = standard

○ = option



from €
960,-

KERN ALS-A/ALJ-AM

Page 38/39

- Graphic display and convenient recipe function
- Internal and external adjustment
- Large glass draught shield with 3 sliding doors
- Large weighing capacities at a top price



The price leader in analytical balances, also with internal adjustment

Features

- KERN ADJ: Automatic internal adjustment in the case of a change in temperature $\geq 2\text{ }^{\circ}\text{C}$ 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
- **1** 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

Technical data

- Large backlit LCD display, digit height 16 mm
- Dimensions weighing surface, stainless steel, \varnothing 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

- **2** Ioniser to neutralise electrostatic charge, KERN YBI-01A, **€ 890,-**
- **3** Precious stones plate, aluminium with practical spout, W×D×H 83×66×23 mm, KERN AEJ-A05, **€ 40,-**
- **4** Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, **€ 850,-**
- 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

CAL INT CAL EXT ET RS 232 GLP PRINTER PCS PERCENT UNIT MULTI FORCE 1 DAY

OPTION

DAkkS +3 DAYS

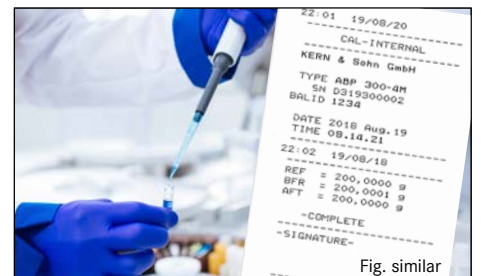
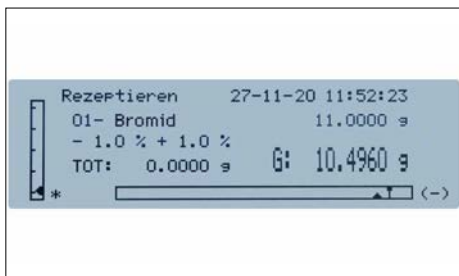
Model	Weighing capacity	Readability	Reproducibility	Linearity	Net weight	Price excl. of VAT ex works €	Option	
							DAkkS KERN	Certificate €
KERN	[Max] g	[d] mg	mg	mg	approx. kg			
ADB 100-4	120	0,1	0,2	$\pm 0,4$	4,4	620,-	963-101	152,-
ADB 200-4	210	0,1	0,2	$\pm 0,4$	4,4	640,-	963-101	152,-
ADB 600-C3	600 ct	0,001 ct	0,002 ct	$\pm 0,004$ ct	3,8	610,-	963-101	152,-
ADJ 100-4	120	0,1	0,2	$\pm 0,4$	5	750,-	963-101	152,-
ADJ 200-4	210	0,1	0,2	$\pm 0,4$	5	790,-	963-101	152,-
ADJ 600-C3	600 ct	0,001 ct	0,002 ct	$\pm 0,004$ ct	4,5	740,-	963-101	152,-

FACE
LIFT



KERN ALJ 200-5DA with optional ionisor **I**, see Accessories. High-precision semi-microbalance. Thanks to its precision, this model is suitable to calibrate pipettes.
Tip: To avoid evaporation, we recommend affordable capillary tubes. (cf. standard 8655)

Analytical balance with high weighing capacity, graphic display and convenient recipe function



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



Features

- **NEW:** 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
- ALJ-A03: Ionizer 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
- 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, \varnothing 80 mm
- Overall dimensions (incl. draught shield) WxDxH 210x340x330 mm
- Weighing space WxDxH 160x140x205 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,-**
- **1** 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, the scope of delivery is the rear panel, ionizer, power supply. Factory Option, KERN ALJ-A03, **€ 620,-**
- **2** 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,-**
- **3** Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, **€ 850,-**
- 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), KERN 961-231B, **€ 750,-**
- Further details, plenty of further accessories and suitable printers see *Accessories*

STANDARD



OPTION



FACTORY



Model	Weighing capacity [Max] g	Readability [d] mg	Verification value [e] mg	Minimal load [Min] mg	Reproducibility mg	Linearity mg	Price excl. of VAT ex works €	Option			
								Verification		DAkkS Calibr. Certificate	
KERN								MD KERN	€	DAkkS KERN	€
ALS 160-4A	160	0,1	-	-	0,1	± 0,3	960,-	-	-	963-101	152,-
ALS 250-4A	250	0,1	-	-	0,1	± 0,3	980,-	-	-	963-101	152,-
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 200-5DA	82 220	0,01 0,1	-	-	0,04 0,1	± 0,1 0,2	1690,-	-	-	963-101	152,-
ALJ 160-4A	160	0,1	-	-	0,1	± 0,3	1060,-	-	-	963-101	152,-
ALJ 160-4AM	160	0,1	1	10	0,2	± 0,3	1130,-	965-201	120,-	963-101	152,-
ALJ 250-4A	250	0,1	-	-	0,1	± 0,3	1060,-	-	-	963-101	152,-
ALJ 250-4AM	250	0,1	1	10	0,2	± 0,3	1130,-	965-201	120,-	963-101	152,-
ALJ 310-4A	310	0,1	-	-	0,1	± 0,3	1100,-	-	-	963-101	152,-
ALJ 500-4A	510	0,1	-	-	0,2	± 0,4	1860,-	-	-	963-101	152,-

04



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

- 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
- ABS-N: 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
- ABJ-NM has OIML certification
- Protective working cover included with delivery



Technical data

- Large LCD display, digit height 14 mm
- Dimensions of weighing surface, stainless steel, \varnothing 91 mm
- Overall dimensions (incl. draught shield) WxDxH 210x340x325 mm
- Weighing space WxDxH 174x162x227 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,-
- 1 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,-
- 2 Ioniser 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, € 90,-
- 3 Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, € 850,-
- 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*



Single-cell advanced technology:

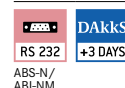
- **Fully automatic manufactured weighing cell from one piece of material**
- **Stable temperature behaviour**
- **Short stabilisation time:** steady weight values within approx. 3 s under laboratory conditions
- **Shock proof construction**
- **High corner load performance**

04

STANDARD



OPTION



FACTORY



Model	Weighing capacity [Max] g	Readability [d] mg	Verification value [e] mg	Minimal load [Min] mg	Reproducibility mg	Linearity mg	Price excl. of VAT ex works €	Option			
								Verification		DAkkS Calibr. Certificate	
								M	€	DAkkS KERN	€
ABS 80-4N	82	0,1	-	-	0,2	\pm 0,3	920,-	-	-	963-101	152,-
ABS 120-4N	120	0,1	-	-	0,2	\pm 0,3	1000,-	-	-	963-101	152,-
ABS 220-4N	220	0,1	-	-	0,2	\pm 0,3	1070,-	-	-	963-101	152,-
ABS 320-4N	320	0,1	-	-	0,2	\pm 0,3	1200,-	-	-	963-101	152,-
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	\pm 0,3	1030,-	-	-	963-101	152,-
ABJ 120-4NM	120	0,1	1	10	0,2	\pm 0,3	1050,-	-	-	963-101	152,-
ABJ 220-4NM	220	0,1	1	10	0,2	\pm 0,3	1150,-	-	-	963-101	152,-
ABJ 320-4NM	320	0,1	1	10	0,2	\pm 0,3	1320,-	-	-	963-101	152,-
ACS 80-4	82	0,1	-	-	0,2	\pm 0,3	1050,-	-	-	963-101	152,-
ACS 100-4	120	0,1	-	-	0,2	\pm 0,3	1130,-	-	-	963-101	152,-
ACS 200-4	220	0,1	-	-	0,2	\pm 0,3	1190,-	-	-	963-101	152,-
ACS 300-4	320	0,1	-	-	0,2	\pm 0,3	1350,-	-	-	963-101	152,-
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.											
ACJ 80-4M	82	0,1	1	10	0,2	\pm 0,3	1160,-	965-201	120,-	963-101	152,-
ACJ 100-4M	120	0,1	1	10	0,2	\pm 0,3	1180,-	965-201	120,-	963-101	152,-
ACJ 200-4M	220	0,1	1	10	0,2	\pm 0,3	1280,-	965-201	120,-	963-101	152,-
ACJ 300-4M	320	0,1	1	10	0,2	\pm 0,3	1470,-	965-201	120,-	963-101	152,-



The premium model with single-cell weighing system

Features

- Automatic internal adjustment in the case of a change in temperature $\geq 0,5\text{ }^{\circ}\text{C}$ 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.
- Protective working cover included with delivery

Technical data

- Large LCD display, digit height 14 mm
- Dimensions weighing surface, stainless steel, $\varnothing 80\text{ mm}$
- Overall dimensions (incl. draught shield) WxDxH 217x356x338 mm
- Weighing space WxDxH 168x172x223 mm
- Net weight approx. 7 kg
- Permissible ambient temperature $10\text{ }^{\circ}\text{C}/30\text{ }^{\circ}\text{C}$

Accessories

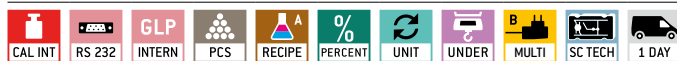
- Protective working cover, scope of delivery: 5 items, KERN ABT-A02S05, **€ 40,-**
- **1** Set for density determination of liquids and solids with density $\leq/\geq 1$, the density is indicated directly on the display, KERN YDB-03, **€ 390,-**
- **2** Ioniser to neutralise electrostatic charge, KERN YBI-01A, **€ 890,-**

- **3** Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, **€ 850,-**
- 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. 4 s under laboratory conditions
- **Shock proof construction**
- **High corner load performance**

STANDARD



OPTION



FACTORY



Model	Weighing capacity [Max] g	Readability [d] mg	Verification value [e] mg	Minimal load [Min] mg	Reproducibility mg	Linearity mg	Price excl. of VAT ex works €	Option			
								Verification		DAkkS Calibr. Certificate	
KERN								M KERN	€	DAkkS KERN	€
ABT 120-4NM	120	0,1	1	10	0,1	$\pm 0,2$	1450,-	965-201	120,-	963-101	152,-
ABT 220-4NM	220	0,1	1	10	0,1	$\pm 0,2$	1760,-	965-201	120,-	963-101	152,-
ABT 320-4NM	320	0,1	1	10	0,1	$\pm 0,3$	1960,-	965-201	120,-	963-101	152,-
ABT 100-5NM	101	0,01	1	1	0,05	$\pm 0,15$	1900,-	965-201	120,-	963-101	152,-
Dual-range balance switches automatically to the next largest weighing capacity [Max] and readability [d]											
ABT 120-5DNM	42 120	0,01 0,1	1	1	0,02 0,1	$\pm 0,05 0,2$	2000,-	965-201	120,-	963-101	152,-
ABT 220-5DNM	82 220	0,01 0,1	1	1	0,05 0,1	$\pm 0,1 0,2$	2060,-	965-201	120,-	963-101	152,-

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.

TIPS FROM THE EXPERTS

As well as our balances and test services, we can offer you an extensive range of microscopes and refractometers.

We will offer you reliable quality at fair prices and with the shortest delivery times. Our product specialists will give you professional advice, will work with you to find the right product and will provide comprehensive support after the purchase too.

This ensures a high level of investment security and a good feeling – KERN, the nice balance manufacturer from the wilds of Southern Germany.

For all details on our ranges, please see www.kern-sohn.com or request your own personal catalogues right now: Telephone +49 7433 9933-0



*Daniel Junger,
Head of Product Management
Optical devices*



“No compromises with optical device”

KERN offers you a complete, carefully-designed range of biological microscopes, stereo microscopes, metallurgical microscopes, polarisation microscopes, especially flexible, preconfigured stereomicroscope sets, individually configurable stereomicroscope systems as well as microscope cameras and camera software

“High-precision refractive index measurement for laboratories and industry”

Quick and easy determination of measured values, whether on site, in production or in the laboratory, ensuring safety, consistent quality and accelerating processes. This is what KERN's analog and digital refractometers stand for and at an extremely attractive price in consistently high quality.

All microscopes, microscope cameras, refractometers and a variety of practical accessories can be found in the new KERN Catalog of Microscopes & Refractometers 2021.



KERN OBE-13



04



2 KERN ABP 100-5DM with optional ionizer

1 **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



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



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 $\geq 1\text{ }^{\circ}\text{C}$ or time-controlled 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
- 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.
- **1** 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 lighting conditions
- Dimensions weighing surface $\varnothing 91\text{ mm}$
- Overall dimensions (incl. draught shield) WxDxH, 213x433x344 mm
- Weighing space WxDxH 166x156x220 mm
- Net weight approx. 8 kg
- Permissible ambient temperature 10 $^{\circ}\text{C}$ /30 $^{\circ}\text{C}$

Accessories

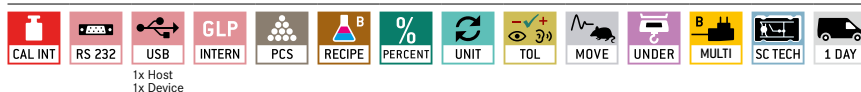
- Protective working cover, scope of delivery: 5 items, KERN YBA-A06S05, **€ 40,-**
- Set for density determination of liquids and solids with density $\leq/\geq 1$, the density is indicated directly on the display, KERN YDB-03, **€ 390,-**

- **2** Draft shield rear panel with integrated ioniser to neutralise electrostatic charge. Is fitted in place of the existing glass rear panel of the draft shield. Suitable for all models in the KERN ABP range, please order at the time you order your balance, the scope of delivery is the rear panel, ioniser, power supply. Factory Option, KERN ABP-A01, **€ 1710,-**
- USB barcode scanner, hand-held version, dimensions WxDxH 152x84x63 mm, KERN PET-A09, **€ 350,-**
- USB keyboard for easy capture of items, descriptions etc., dimensions WxDxH 440x128x24 mm, KERN PET-A06, **€ 45,-**
- **3** Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, **€ 850,-**
- 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), KERN 961-231B, **€ 750,-**
- 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) under laboratory conditions
- **Shock proof construction**
- **High corner load performance**

STANDARD



OPTION

FACTORY



Model	Weighing capacity [Max] g	Readability [d] mg	Verification value [e] mg	Minimal load [Min] mg	Reproducibility mg	Linearity mg	Price excl. of VAT ex works €	Option					
								Verification		DAkKS Calibr. Certificate			
KERN								MT KERN	€	DAkKS KERN	€		
ABP 100-4M	120	0,1	1	10	0,1	$\pm 0,2$	1840,-	965-201	120,-	963-101	152,-		
ABP 200-4M	220	0,1	1	10	0,1	$\pm 0,2$	2220,-	965-201	120,-	963-101	152,-		
ABP 300-4M	320	0,1	1	10	0,2	$\pm 0,3$	2470,-	965-201	120,-	963-101	152,-		
Dual-range balance switches automatically to the next largest weighing capacity [Max] and readability [d]													
ABP 100-5DM	52 120	0,01 0,1	1	1	0,02 0,1	$\pm 0,05 0,2$	2660,-	965-201	120,-	963-101	152,-		
ABP 200-5DM	102 220	0,01 0,1	1	1	0,05 0,1	$\pm 0,1 0,2$	2850,-	965-201	120,-	963-101	152,-		

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 & SOHN GmbH
Balances, Test weights, Microscopes,
DAkkS calibration laboratory

Ziegelei 1
 72336 Balingen
 Germany

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

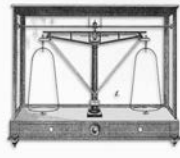
info@kern-sohn.com
 www.kern-sohn.com

Printed in Germany
 by KERN & SOHN GmbH
 z-ob-er-kr-20211



1769

Ancestor Johann Jakob Sauter built the Hahn inclination scale out of iron, a foundation stone for weighing for the balance industry in Southern Germany



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/EC)



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



2017

Come with KERN into the digital future: Expansion of the model ranges compatible with Industry 4.0, as well as the related services



2019

Significant anniversary year! 25 years of accredited DAkkS/DKD laboratory 175 years of KERN & SOHN 250 years of balance manufacture in the Sauter family-owned company



2020

Construction of Ziegelei 3.0, extension of administration building