

# **ANALYTICAL BALANCES**



## KERN Pictograms



#### Internal adjusting:

Quick setting up of the balance's accuracy with internal adjusting weight (motordriven)



#### Adjusting program CAL:

For quick setting up of the balance's accuracy. External adjusting weight required



#### **Easy Touch:**

Suitable for the connection, data transmission and control through PC, tablet or smartphone



#### Memory:

Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.



#### Alibi memory:

Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard. For details see page 206



#### Data interface RS-232:

To connect the balance to a printer, PC or network



#### 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



#### **USB** data interface:

To connect the balance to a printer, PC or other peripherals



#### Bluetooth\* data interface:

To transfer data from the balance to a printer, PC or other peripherals



#### WLAN data interface:

To transfer data from the balance to a printer, PC or other peripherals



#### **Control outputs**

(optocoupler, digital I/O): To connect relays, signal lamps,

valves, etc.



#### Analogue interface:

to connect a suitable peripheral device for analogue processing of the measurements



#### Interface for second balance:

For direct connection of a second balance



#### Network interface:

For connecting the scale to an Ethernet network



#### Wireless data transfer:

evaluation unit using an integrated radio module



#### **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

The balance displays serial number,

regardless of a printer connection

With weight, date and time. Only with

KERN printers, see page 161/162

Reference quantities selectable.

Display can be switched from piece

The weights of the recipe ingredients

can be added together and the total weight of the recipe can be printed out

Internal memory for complete recipes

Internal memory for complete recipes

ingredients. User guidance through display, multiplier function, adjustment

of recipe when dosages are exceeded

with name and target value of the recipe

with name and target value of the

recipe ingredients. User guidance

user ID, weight, date and time,

GLP/ISO log:

GLP/ISO log:

Piece counting:

Recipe level A:

Recipe level B:

through display

Recipe level C:

to weight



#### Protection against dust and water splashes IPxx:

The type of protection is shown in the pictogram. For details see page 70



#### Stainless steel:

The balance is protected against corrosion



#### Suspended weighing:

Load support with hook on the underside of the balance



#### **Battery operation:**

Ready for battery operation. The battery type is specified for each device



#### Rechargeable battery pack:

Rechargeable set



Universal mains adapter: with universal input and optional input socket adapters for A) EU, CH B) EU, CH, GB, USA C) EU, CH, GB, USA, AUS



#### Mains adapter:

230 V/50 Hz in standard version for EU. On request GB, USA or AUS version available



Power supply: Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, USA or AUS on request



#### Weighing principle: Strain gauges

Electrical resistor on an elastic deforming body



#### Weighing principle: Tuning fork

A resonating body is electromagnetically



excited, causing it to oscillate



#### Weighing principle: Electromagnetic force compensation

Coil inside a permanent magnet. For the most accurate weighings



#### Weighing principle: Single cell technology:

Advanced version of the force compensation principle with the highest level of precision



### Verification possible:

The time required for verification is specified in the pictogram



### DAkkS calibration possible (DKD):

The time required for DAkkS calibration is shown in days in the pictogram



### Package shipment:

The time required for internal shipping preparations is shown in days in the pictogram



#### Pallet shipment:

The time required for internal shipping preparations is shown in days in the pictogram



#### Totalising level A:

or barcode recognition

The weights of similar items can be added together and the total can be printed out



#### Percentage determination:

Determining the deviation in % from the target value (100 %)

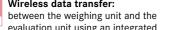
#### Weighing units:

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 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





#### Hold function:

(Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average value

# 05

## **Analytical balances**

Readability	Weighing capacity	Model	Price excl. of VAT	Page		M	Ť	Ť		-	<u> </u>
[d]	[Max]		ex works		DAYS		CAL INT	CAL EXT	MEMORY	RS 232	RECIPE
mg	g	KERN	€			For an ex	xplanation	on the pi	ctos, see f	ront flap	
0,01	101	ABT 100-5NM	1900	49	1	0	•			•	•
0.01   0.1	42   120	ABT 120-5DNM	2000,-	49	1	0	•			•	•
0,01   0,1	52   120	ABP 100-5DM	2660,-	50	1						
0,01   0,1	82   220	ALJ 200-5DA	1680,-	46	1	0	•			•	•
0,01   0,1	82   220	ABT 220-5DNM	2060,-	49	1	0	•			•	•
0,01   0,1	102   220	ABP 200-5DM	2850,-	50							
0,1	82	ABS 80-4N	920,-	48	1			•		0	•
0,1	82	ABJ 80-4NM	1030,-	48	1	0	•			0	•
0,1	120	ADB 600-C3 ♥	610,-	45	1			•			
0,1	120	ADB 100-4	620,-	45	1			•			
0,1	120	ABS 120-4N	1000,-	48	1					0	•
0,1	120	ABJ 120-4NM	1050,-	48	1	0	•	•		0	•
0,1	120	ABT 120-4NM	1450,-	49	1	0	•				•
0,1	120	ABP 100-4M	1840,-	50	1						
0,1	160	ALS 160-4A	930,-	46	1			•		•	•
0,1	160	ALJ 160-4A	1050,-	46	1		•				•
0,1	160	ALJ 160-4AM	1050,-	46	1	0	•			•	•
0,1	210	ADB 200-4	640,-	45	1			•		•	
0,1	220	ABS 220-4N	1070,-	48	1			•		0	•
0,1	220	ABJ 220-4NM	1150,-	48	1	0	•			0	•
0,1	220	ABT 220-4NM	1760,-	49	1	0	•			•	•
0,1	220	ABP 200-4M	2220,-	50	1						
0,1	250	ALS 250-4A	980,-	46	1			•		•	•
0,1	250	ALJ 250-4A	1060,-	46	1		•			•	•
0,1	250	ALJ 250-4AM	1090,-	46	1	0	•			•	•
0,1	310	ALJ 310-4A	1170,-	46	1		•			•	•
0,1	320	ABS 320-4N	1200,-	48	1			•		0	•
0,1	320	ABJ 320-4NM	1320,-	48	1	0	•			0	•
0,1	320	ABT 320-4NM	1960,-	49	1	0	•			•	•
0,1	320	ABP 300-4M	2470,-	50	1						
0,1	510	ALJ 500-4A	1860,-	46	1		•				•



# **Christian D'Onofrio**Product specialist Analytical balances

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# **HIGHLIGHT**



 Large glass draught shield with 3 sliding doors

Large weighing capacities at a top price

 Now also available with internal adjustment

KERN ADB Page 45











## The price leader in analytical balances

#### **Features**

- 11 ADB 600-C3: Compact, space-saving carat balance with a readout of 0.001 ct and a weighing capacity of 600 ct. The high level of accuracy saves hard cash wherever you are weighing valuable precious stones
- · Adjusting program CAL for quick setting of the balance accuracy using an external test weight
- Level indicator and foot screws to level the balance precisely, fitted as standard, to give the most accurate weighing results
- · 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, Ø 90 mm
- Overall dimensions (incl. draught shield)  $W \times D \times H$ KERN ADB/ADJ: 230×310×330 mm
  - KERN ADB-C/ADJ-C: 230×310×230 mm
- Weighing space W×D×H KERN ADB/ADJ: 170×160×205 mm KERN ADB-C/ADJ-C: 170×160×110 mm
- · Net weight approx. 4,4 kg
- Permissible ambient temperature 10 °C/30 °C

#### **Accessories**

- 2 lonizer to neutralise electrostatic charge, KERN YBI-01A, **€ 940,-**
- B Precious stones plate, aluminium with practical spout, W×D×H 83×66×23 mm, KERN AEJ-A05, € 40,-
- Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, € 990,-
- · 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

























Model	Weighing capacity	Readability	Reproducibility	Linearity	Price	Option	
					excl. of VAT	DAkkS Calibr. Ce	ertificate
	[Max]	[d]			ex works	DAkkS	
KERN	g	mg	mg	mg	€	KERN	€
ADB 100-4	120	0,1	0,2	± 0,4	620,-	963-101	138,-
ADB 200-4	210	0,1	0,2	± 0,4	640,-	963-101	138,-
ADB 600-C3 ♥	120 g   600 ct	0,1 mg   0,001 ct	0,2 mg   0,002 ct	± 0,4 mg   ± 0,004 ct	610,-	963-101	138,-





■ KERN ALJ 200-5DA with optional ionisor ②, see *Accessories* 

# Analytical balance range with large weighing capacities – now also with EC type approval [M] or available as semi-micro analytical balance

#### **Features**

- ALJ 200-5DA: High-precision semi-micro analytical balance
- 2 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
- 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
- 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
- Protective working cover included with delivery

#### Analytical balance KERN ALS-A · ALJ-AM







#### **Technical data**

- · Backlit LCD display, digit height 17 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 KERN ALS-A/ALJ-A/ALJ-DA: 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,-
- 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 KERN ALS-A/ALJ-AM/ ALJ-DA 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,-
- 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,-

- Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, € 990,-
- · 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





























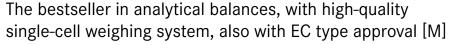


Model	Weighing	Readability	Verification	Minimal load	Reproduci-	Linearity	Price		Option				
	capacity		value		bility		excl. of VAT	Verification		Verification DAkkS Calib		DAkkS Calibr. Ce	rtificate
	[Max]	[d]	[e]	[Min]			ex works	MID		DAkkS			
KERN	g	mg	mg	mg	mg	mg	€	KERN	€	KERN	€		
ALS 160-4A	160	0,1	-	-	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 unification place and account of the constitution in its lateral data in a transition													

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 fair address of the location of use.												
ALJ 200-5DA	82   220	0,01   0,1	1	1	0,02   0,1	± 0,03   0,3	1680,- 🕛	-	-	963-101	138,-		
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	1060,-	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	1170,- 🕛	-	-	963-101	138,-		
ALL 500-4A	510	0.1			0.2	+ 0.4	1040			063 101	130		





#### **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: 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
- Protective working cover included with delivery

#### **Technical data**

- · Large LCD display, digit height 14 mm
- Dimensions weighing surface, stainless steel,  $\emptyset$  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 approx. 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,-
- Ionizer to neutralise electrostatic charge, KERN YBI-01A, € 940,-
- Data interface RS-232, interface cable included, approx. 1,5 m KERN ACS-A01, € 90,-
- 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

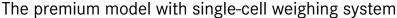
Model	Weighing	Readability	Verification	Minimal load	Reproduci-	Linearity	Price	Option					
	capacity		value		bility		excl. of VAT	Verification		√ Verification DAkk		DAkkS Calibr. Ce	rtificate
	[Max]	[d]	[e]	[Min]			ex works	MID	€	DAkkS	€		
KERN	g	mg	mg	mg	mg	mg	€	KERN	€	KERN	€		
ABS 80-4N	82	0,1	-	-	0,2	± 0,3	920,- 🕛	-	-	963-101	138,-		
ABS 120-4N	120	0,1	-	-	0,2	± 0,3	1000,- 🕛	-	-	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	1200 🕛	-	-	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	1030,- 🕛	965-201	110,-	963-101	138,-			
ABJ 120-4NM	120	0,1	1	10	0,2	± 0,3	1050,- 🕛	965-201	110,-	963-101	138,-			
ABJ 220-4NM	220	0,1	1	10	0,2	± 0,3	1150,- 🕛	965-201	110,-	963-101	138,-			
ABJ 320-4NM	320	0,1	1	10	0,2	± 0,3	1320,- 🕛	965-201	110,-	963-101	138,-			

STANDARD





#### **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.
- · 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 °C/30 °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  $\leq \geq 1$ , the density is indicated directly on the display, KERN YDB-03, € 390,-
- Ionizer to neutralise electrostatic charge, KERN YBI-01A, € 940,-
- Is Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, € 990,-
- 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. 4 s under laboratory conditions
- Shock proof construction
- · High corner load performance

STANDARD



































Model	Weighing	Readability	Verification	Minimal	Reproduci-	Linearity	Price	Option			
	capacity		value	load	bility		excl. of VAT	Verifica	tion	on DAkkS Calibr. Ce	
	[Max]	[d]	[e]	[Min]			ex works	MI		DAkkS	
KERN	g	mg	mg	mg	mg	mg	€	KERN	€	KERN	€
ABT 120-4NM	120	0,1	1	10	0,1	± 0,2	1450,- 🕛	965-201	110,-	963-101	138,-
ABT 220-4NM	220	0,1	1	10	0,1	± 0,2	1760,- 🕛	965-201	110,-	963-101	138,-
ABT 320-4NM	320	0,1	1	10	0,1	± 0,3	1960,- 🕛	965-201	110,-	963-101	138,-
ART 100-5NM	101	0.01	1	1	0.05	± 0.15	1000	065 201	110	063 101	130

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 capacity [Max] and readibility [d]													
ABT 120-5DNM	42   120	0,01   0,1	1	1	0,02   0,1	± 0,05   0,2	2000,- 🕛	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	2060 - 🕕	965-201	110	963-101	138			









**III KERN 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



**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 capacities. 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. For applications which do not require verification the time interval can be individually adjusted
- 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 for up to 10 users can be saved: user name/user 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. Pat. FDA 21 Part 11 (for example (weighing result, sample ID, user name, scales ID, ...)
- Menu language DE, GB
- 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
- Multi-function weighing plate included with delivery, minimises the effect of currents of air in the weighing space and therefore significantly improves the stabilization 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  $\emptyset$  91 mm
- Overall dimensions (incl. draught shield) W×D×H 213×407×344 mm
- Weighing space W×D×H 166×156×220 mm
- · Net weight approx. 8 kg
- Permissible ambient temperature 10 °C/30 °C

#### **Accessories**

- Protective working cover, scope of delivery: 5 items, KERN YBA-A06S05, € 40,-
- II 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 KERN ABP range, please order at the time you order your balance, the scope of delivery is the rear panel, ionizer, power supply. Factory Option, KERN ABP-A01, € 1710,-
- B Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-03, € 990,-
- · 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

































DAkkS



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	MID		DAkkS	
KERN	g	mg	mg	mg	mg	mg	€	KERN	€	KERN	€
ABP 100-4M	120	0,1	1	10	0,1	± 0,2	1840,-	965-201	110,-	963-101	138,-
ABP 200-4M	220	0,1	1	10	0,1	± 0,2	2220,-	965-201	110,-	963-101	138,-
ABP 300-4M	320	0,1	1	10	0,1	± 0,3	2470,-	965-201	110,-	963-101	138,-
	Dual	-range balance	e switches au	tomatically to	the next large	st weighing ca	pacity [Max] a	nd readibility	/ [d]		
ABP 100-5DM	52   120	0,01   0,1	1	1	0,02   0,1	± 0,03   0,3	2660,-	965-201	110,-	963-101	138,-
ABP 200-5DM	102   220	0,01   0,1	1	1	0,02   0,1	± 0,03   0,3	2850,-	965-201	110,-	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.