

TRADITION AND INNOVATION – 169 YEARS OF KERN

Independent and family-run, KERN is already in its 6th generation and is synonymous with quality and reliability in customer service.

FAST

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

COMPETENT

- DKD accreditation (DIN EN ISO/IEC 17025)
- QM system (DIN EN ISO 9001:2008)
- Initial verification by the manufacturer (2009/23/ECC)
- Medical (DIN EN ISO 13485 & 93/42/EWG)

RELIABLE

- 2+ years warranty
- Precision in weighing technology for the last 169 years

DIVERSE

- One-stop shopping: from pocket balances through to floor scales – everything from one supplier
- Find the balance you want in no time with the „Balance Quick-Finder“

ANALYTICAL BALANCES



KERN – Professional measuring.

GB

2013

3 Analytical balances

KERN Model		Page
ABS-N ABJ-NM	The bestseller in analytical balances, now also with high-quality single-cell weighing system and verification [M]	42
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KERN Analytical balances with Single-cell cutting edge technology



To satisfy stricter requirements for precision, speed, and → **reproducibility** of weight values, monolithic balance cells are increasingly the standard. These are measurement sensors for determination

of weight that are fabricated from an aluminium. These systems distinguish themselves from conventional balance cells in terms of both quality and performance:

- Higher measurement speed
- Stable temperature behaviour
- Higher corner load reliability
- Better measurement precision
- Improved mechanical sturdiness

KERN analytical balances on this measurement principle are designated as using „Single Cell Technology“ (→ **SC TECH**).

To avoid relevant result variations when weighing with high-precision analytical balances, we recommend noting a few basic things:

- Daily → **adjustment**, particularly if there are temperature variations, etc.
- Use of the internal automatic adjustment feature is strongly recommended
- Avoidance of air movement, e.g. open doors, windows, wind protection
- Use of a special weighing table, e.g. **KERN YPS-01**, p. 132
- Use of an ioniser to neutralise electrostatic charges on the items being weighed, e.g. **KERN YBI-01**, p. 132

→ See the glossary on page 158/159

Quick-Finder

o.r. = on request ■ = Standard □ = Option

Read-out	Weighing range	Model	Page	DAYS ready for shipping						
d	Max	KERN			For an explanation of the symbols, see the flap of the envelope					
0,01 mg	101 g	ABT 100-5M	46	1	■	■			□	■
0,01/0,1 mg	42/120 g	ABT 120-5DM	46	1	■	■			□	■
0,01/0,1 mg	80/220 g	AEJ 200-5NM	44	1	■	■			□	■
0,01/0,1 mg	82/220 g	ABT 220-5DM	46	1	■	■			□	■
0,1 mg	80 g	ABS 80-4N	42	1			■		□	■
0,1 mg	80 g	ABJ 80-4NM	42	1	■	■			□	■
0,1 mg	120 g	ABS 120-4N	42	1			■		□	■
0,1 mg	120 g	ABJ 120-4NM	42	1	■	■			□	■
0,1 mg	120 g	ABT 120-4M	46	1	■	■			□	■
0,1 mg	160 g	ALS 160-4A	43	1			■		□	■
0,1 mg	160 g	ALJ 160-4A	43	1	o.r.	■			□	■
0,1 mg	160 g	AES 100-4N	44	1			■		□	■
0,1 mg	160 g	AEJ 100-4NM	44	1	■	■			□	■
0,1 mg	160 g	ALT 160-4B	45	1	o.r.	■		■	□	■
0,1 mg	220 g	ABS 220-4N	42	1			■		□	■
0,1 mg	220 g	ABJ 220-4NM	42	1	■	■			□	■
0,1 mg	220 g	AES 200-4N	44	1			■		□	■
0,1 mg	220 g	AEJ 200-4NM	44	1	■	■			□	■
0,1 mg	220 g	ABT 220-4M	46	1	■	■			□	■
0,1 mg	250 g	ALS 250-4A	43	1			■		□	■
0,1 mg	250 g	ALJ 250-4A	43	1	o.r.	■			□	■
0,1 mg	250 g	ALT 250-4B	45	1	o.r.	■		■	□	■
0,1 mg	310 g	ALJ 310-4A	43	1	o.r.	■			□	■
0,1 mg	320 g	ABS 320-4N	42	1			■		□	■
0,1 mg	320 g	ABJ 320-4NM	42	1	■	■			□	■
0,1 mg	320 g	ABT 320-4M	46	1	■	■			□	■



- 5** 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

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

Features

- **1** Only ABJ-N: **Automatic internal adjustment** in the case of a change in temperature > 2 °C or time-controlled every 4 hours
- **2** Only ABS-N: **Adjusting program CAL**, external test weights at an additional price, see page 133 ff.
- **Dosage aid:** High-stability mode and other filter settings can be selected
- **Simple recipeweighing and documenting** with a combined tare/print function. In addition, the mixing ingredients for the recipe are numbered automatically and printed out with their corresponding number and weight value

- **Identification number:** 4 numeric positions, printed on calibration protocol
- **Automatic data output** to the PC/printer each time the balance reaches a steady state

Technical data

- Large LCD display, digit height 14 mm
- Dimensions of weighing plate Ø 91 mm
- Overall dimensions WxDxH 210x340x325 mm
- weighing space WxDxH 174x162x227 mm
- Permissible ambient temperature 10 °C / 30 °C
- Net weight approx. 6 kg

Accessories

- **3** **Data interface RS-232** interface cable included, KERN ACS-A01
- **Protective working cover** standard, can be reordered, KERN ACS-A02
- **Set for density determination** of liquids and solids, KERN ACS-A03
- **Ioniser** to neutralise electrostatic charge, see page 132, KERN YBI-01
- **4** **Weighing table** to absorb vibrations and oscillations, which would otherwise distort the weighing result, see page 132, KERN YPS-01
- **Suitable printers** see page 130

STANDARD

CAL INT CAL EXT GLP PROTOCOL PCS RECIPE PERCENT UNIT TOL SC TECH 1 DAY 3 YEARS WARRANTY

1 2 only with printer 5

OPTION

DKD +3 DAYS

FACTORY

RS 232 M +3 DAYS

3 only ABJ-NM

Model	Weighing range [Max] g	Read-out [d] g	Verific. value [e] g	Minimum load [Min] mg	Reproducibility g	Linearity mg	Options		
							Verification		DKD Calibr. Certificate
							MI KERN		DKD KERN
ABS 80-4N	80	0,1	-	-	0,2	± 0,3	-	-	963-101
ABS 120-4N	120	0,1	-	-	0,2	± 0,3	-	-	963-101
ABS 220-4N	220	0,1	-	-	0,2	± 0,3	-	-	963-101
ABS 320-4N	320	0,1	-	-	0,2	± 0,3	-	-	963-101
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	80	0,1	1	10	0,2	± 0,3	965-201		963-101
ABJ 120-4NM	120	0,1	1	10	0,2	± 0,3	965-201		963-101
ABJ 220-4NM	220	0,1	1	10	0,2	± 0,3	965-201		963-101
ABJ 320-4NM	320	0,1	1	10	0,2	± 0,3	965-201		963-101



03



Precision and price down to a point, with external and internal adjustment

Features

- 1 only ALJ-A: **Automatic internal adjustment** in the case of a change in temperature > 1,5 °C
- 2 only ALS-A: **Adjusting program CAL** for quick setting of the balance accuracy, external test weights at an additional price, see page 133
- 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

- **Weighing with tolerance range**, ideal for portion division, dispensing, grading

Technical data

- Backlit LCDdisplay, digit height 17 mm
- Dimensions of weighing plate Ø 80 mm
- Overall dimensions (incl. draft shield): 210x340x330 mm
- Weighing space WxDxH 160x140x205 mm
- Net weight approx. 5,7 kg
- Permissible ambient temperature 5 °C / 35 °C

Accessories

- **Protective working cover**, KERN ALJ-A01
- 3 **Ioniser** to neutralise electrostatic charge, see page 132, KERN YBI-01
- 4 **Weighing table** to absorb vibrations and oscillations, which would otherwise distort the weighing result, see page 132, KERN YPS-01
- **Set for density determination** of liquids and solids, KERN ALT-A02
- **Suitable printers** see page 130

STANDARD



OPTION



Model	Weighing range [Max] g	Read-out [d] g	Reproducibility g	Linearity mg	Option	
					DKD Calibr. Certificate	
KERN					DKD	
ALS 160-4A	160	0,1	0,1	± 0,3	963-101	
ALS 250-4A	250	0,1	0,1	± 0,3	963-101	
ALJ 160-4A	160	0,1	0,1	± 0,3	963-101	
ALJ 250-4A	250	0,1	0,1	± 0,3	963-101	
ALJ 310-4A	310	0,1	0,1	± 0,3	963-101	



Compact high-end analytical balance with useful pipette calibration program

Features

- 1 only AEJ-NM: **Automatic internal adjustment** in the case of a change in temperature > 0,8 °C or time-controlled every 3 hours
- Intuitive pipette calibration function** to ensure data integrity and to minimise the risks in the daily work with your pipettes
- 2 Vmin: 10% of the volume
Va: Arithmetic mean
Es: Systematic error
Vmax: 100 of the volume
Sr: Standard deviation
- GLP/ISO record keeping** of weight values with date, time and serial number
- Higher weighing speed by switching off the last digit

- **Totalizing** of weights (manual/automatic)
- **Modern all glass draft wind shield** for optimal visibility of the weighing object
- **Dispensing mode:** By pressing one key you can set all relevant parameters for this dispensing process

Technical data

- Large backlit LCDdisplay, digit height 17 mm
- Dimensions of weighing plate Ø 85 mm
- Overall dimensions WxDxH 206x335x335 mm
- Weighing space WxDxH 168x160x225 mm
- Net weight approx. 5,4 kg
- Permissible ambient temperature 18 °C / 30 °C

Accessories

- Protective working cover, standard, can be reordered, KERN ALS-A02
- 3 **Set for density determination** of liquids and solids. Step-by-step user guidance, as well as the calculated density shown immediately on the display, similar to illustration, KERN AES-A01N
- **Ioniser** to neutralise electrostatic charge, see page 132, KERN YBI-01
- **Weighing table** to absorb vibrations and oscillations, which would otherwise distort the weighing result, see page 132, KERN YPS-01
- **Suitable printers** see page 130

STANDARD



OPTION



FACTORY

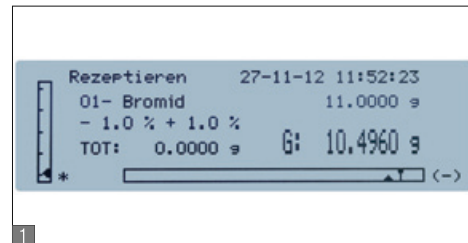


1 only with printer

only AEJ-NM

Model	Weighing range [Max] g	Read-out [d] g	Verific. value [e] g	Minimum load [Min] mg	Reproducibility g	Linearity mg	Options			
							Verification		DKD Calibr. Certificate	
							MI KERN		DKD KERN	
AES 100-4N	160	0,1	-	-	0,2	± 0,2	-	-	963-101	
AES 200-4N	220	0,1	-	-	0,2	± 0,2	-	-	963-101	
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.										
AEJ 100-4NM	160	0,1	1	10	0,2	± 0,3	965-201		963-101	
AEJ 200-4NM	220	0,1	1	10	0,2	± 0,3	965-201		963-101	
AEJ 200-5NM	80 220	0,01 0,1	1	1	0,04 0,1	± 0,1 ± 0,2	965-201		963-101	

Analytical balance KERN ALT-B



03

Analytical balance with extensive recipe database

Features

- **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
- **Rapid and efficient operation** thanks to the graphics display
- **Simple plain text user guidance in the display** in the following languages: D, GB, F, I, E, PT
- **Automatic internal adjustment** in the case of a change in temperature > 1,5 °C or time-controlled every 20 minutes
- **Percentage determination:** makes it possible to store a given weight value (100%) and to determine deviations from this target value
- **Weighing with tolerance range (checkweighing):** Input of an upper/lower limit value. A visual signal assists with portion division, dispensing or grading

- **Vibration-free weighing:** at the push of a button, a stable average weight is given when the environmental conditions are unstable
- **GLP/ISO record keeping** of weight values with date, time and serial number
- **Modern all glass draft wind shield** for optimal visibility of the weighing object

Technical data

- Large backlit LCDdisplay, digit height 15 mm
- Dimensions weighing surface Ø 80 mm
- Dimensions housing WxDxH 210x340x330 mm
- Weighing space WxDxH 160x140x205 mm
- Net weight approx. 5,7 kg
- Permissible ambient temperature 5 °C / 35 °C

Accessories

- **Protective working cover,** KERN ALJ-A01
- **Ioniser** to neutralise electrostatic charge, see page 132, KERN YBI-01
- **Weighing table** to absorb vibrations and oscillations, which would otherwise distort the weighing result, see page 132, KERN YPS-01
- **Set for density determination** of liquids and solids. Step-by-step user guidance, as well as the calculated density shown immediately on the display, KERN ALT-A02
- **Suitable printers,** see page 130

STANDARD



OPTION



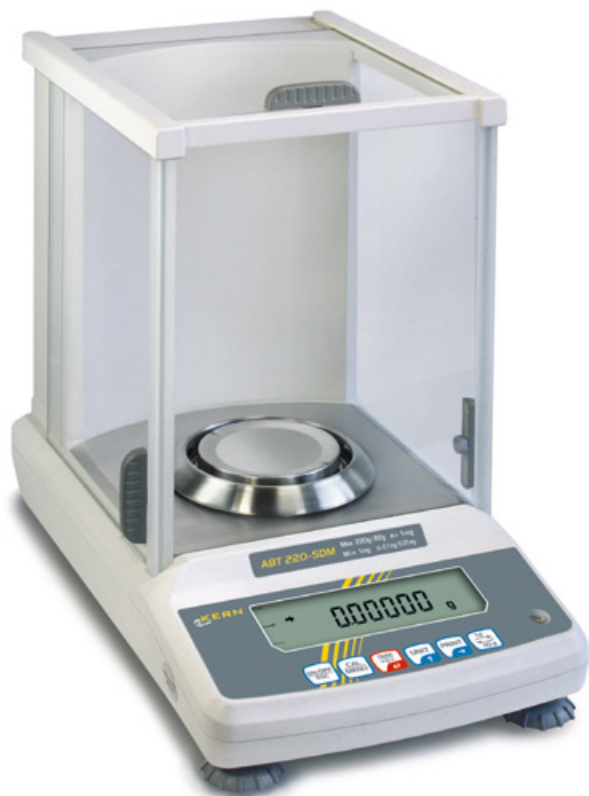
FACTORY



Model	Weighing range [Max] g	Read-out [d] g	Verific. value [e] g	Minimum load [Min] mg	Reproducibility g	Linearity mg	Options			
							Verification		DKD Calibr. Certificate	
							MI KERN	on request	DKD KERN	on request
ALT 160-4B	160	0,1	-	-	0,1	± 0,3	on request	963-101	on request	963-101
ALT 250-4B	250	0,1	-	-	0,1	± 0,3	on request	963-101	on request	963-101

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.

03



The premium model with single-cell weighing system

Features

- **Automatic internal adjustment** in the case of a change in temperature > 0,5 °C or time-controlled every 4 hours
- **Dosage aid:** High-stability mode and other filter settings can be selected
- **Simple recipeweighing and documenting** with a combined tare/print function. In addition, the mixing ingredients for the recipe are numbered automatically and printed out with their corresponding number and weight value
- **Identification number:** 4 numeric positions, printed on calibration protocol
- **Automatic data output to the PC/printer** every time the balance is steady

Technical data

- Large LCD display, digit height 14 mm
- Dimensions of weighing plate Ø 80 mm
- Overall dimensions WxDxH 217x356x338 mm
- weighing space WxDxH 168x172x223 mm
- Net weight approx. 7 kg
- Permissible ambient temperature 10 °C / 30 °C

Accessories

- **Protective working cover**, standard, can be reordered, KERN ABT-A02
- **Set for density determination** of liquids and solids. The density is indicated directly

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

on the display, KERN ABT-A01

- **2 Ioniser** to neutralise electrostatic charge, KERN YBI-01
- **3 Weighing table** to absorb vibrations and oscillations, which would otherwise distort the weighing result, KERN YPS-01
- **Suitable printers** see page 130

STANDARD



only with printer

OPTION



FACTORY

Model	Weighing range [Max] g	Read-out [d] g	Verific. value [e] g	Minimum load [Min] mg	Reproducibility g	Linearity mg	Options			
							Verification		DKD Calibr. Certificate	
							MI	KERN	DKD	KERN
ABT 120-4M	120	0,1	1	10	0,1	± 0,2	965-201		963-101	
ABT 220-4M	220	0,1	1	10	0,1	± 0,2	965-201		963-101	
ABT 320-4M	320	0,1	1	10	0,1	± 0,3	965-201		963-101	
ABT 100-5M	101	0,01	1	1	0,05	± 0,15	965-201		963-101	
Dual-range balance (D = Dual): switches automatically to the next largest weighing range [Max.] and readout [d].										
ABT 120-5DM	42 120	0,01 0,1	1 1	1	0,02 0,1	± 0,05 ± 0,2	965-201		963-101	
ABT 220-5DM	82 220	0,01 0,1	1 1	1	0,05 0,1	± 0,1 ± 0,2	965-201		963-101	

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.