







### Single-cell advanced technology:

- Fully automatic manufacture weighing cell from one piece of material
- Stable temperature behaviour
- Short stabilisation time
- Shock proof construction
- · High corner load performance

# The premium model with single-cell weighing system

### Features

- Automatic internal adjustment in the case of a change in temperature > 0,5 °C and time-controlled every 4 hours
- 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
- 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
- Weighing plate dimensions 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 re-ordered, scope of delivery: 5 items, KERN ABT-A02S05
- 11 Set for density determination of liquids and solids with density  $\leq \geq 1$ . The density is indicated directly on the display, for details see page 182, KERN YDB-03
- 2 loniser to neutralise electrostatic charge, see page 184, KERN YBI-01
- 3 Weighing table to absorb vibrations and oscillations, which would otherwise distort the weighing result, see page 184, KERN YPS-03
- Suitable printers see page 177 ff.





































Model	Weighing	Readout	Verification	Minimum	Repro-	Linearity	Options			
	range		value	load	ducibility		Verification		DAkkS Calibr. Certificate	
	[Max]	[d]	[e]	[Min]			MI		DKD	
KERN	g	mg	mg	mg	mg	mg	KERN		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	

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].									
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	

# **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.



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



ALIBI

Alibi memory: Electronic archiving of weighing results, complying with the 2009/23/EC standard.



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. High tolerance against electromagnetic disturbance.



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.



Interface for second balance: For direct connection of a second balance.



Network interface: For connecting the scale to an Ethernet network. With KERN products you can use a universal RS-232/LAN converter.



Wireless data transfer: between the weighing unit and the evaluation unit using an integrated radio module.



GLP/ISO log: The balance displays the weight, date and time, regardless of a printer



GLP/ISO log: With weight, date and time. Only with KERN printers.



Piece counting: Reference quantities selectable. Display can be switched from piece to weight.



Recipe level A: Separate memory for the weight of the tare container and the recipe ingredients (net total).



Recipe level B: Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display.



Recipe level C: Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display, adjustment of recipe when dosages are exceeded, multiplier function, barcode.



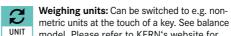
Totalising level A: The weights of similar items can be added together and the total can be printed out.



Totalising level C: Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display, adjustment of recipe when dosages are exceeded, multiplier function, barcode recognition.

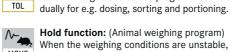


Percentage determination: Determining the deviation in % from the target value (100 %).



model. Please refer to KFRN's website for more details. Weighing with tolerance range: Upper and lower limiting values can be programmed indivi-

Weighing units: Can be switched to e.g. non-



MOVE

**Hold function:** (Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average



Protection against dust and water splashes IPxx: The type of protection is shown in the pictogram.



ATEX explosion protection: Suitable for use in hazardous industrial environments, in which there is explosion danger. The ATEX marking is specified for each device.



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, GB

MULTI

B) EU, GB, CH, USA C) EU, GB, CH, USA, AUS



Mains adapter: 230V/50Hz 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 gauge 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.



Warranty: The warranty period is shown in the pictogram.

## KERN – Precision is our business

To ensure the high precision of your balance KERN offers you the the appropriate test weight in the international OIML error limit classes E1-M3 from 1 mg - 2000 kg. In combination with a DAkkS calibration certificate the best pre-requisite for proper balance calibration.

The KERN DAkkS calibration laboratory today is one of the most modern and best-equipped DAkkS calibration laboratories for balances, test weights and forcemeasurement in Europe.

Thanks to the high level of automation, we can carry out DAkkS calibration of

balances, test weights and force-measuring devices 24 hours a day, 7 days a week.

## Range of services:

- DAkkS calibration of balances with a maximum load of up to 50 t
- DAkkS calibration of weights in the range of 1 mg 2500 kg
- · Database supported management of checking equipment and reminder service
- · Calibration of force-measuring devices
- DAkkS calibration certificates in the following languages D, GB, F, I, E, NL, PL

# Your KERN specialist dealer: