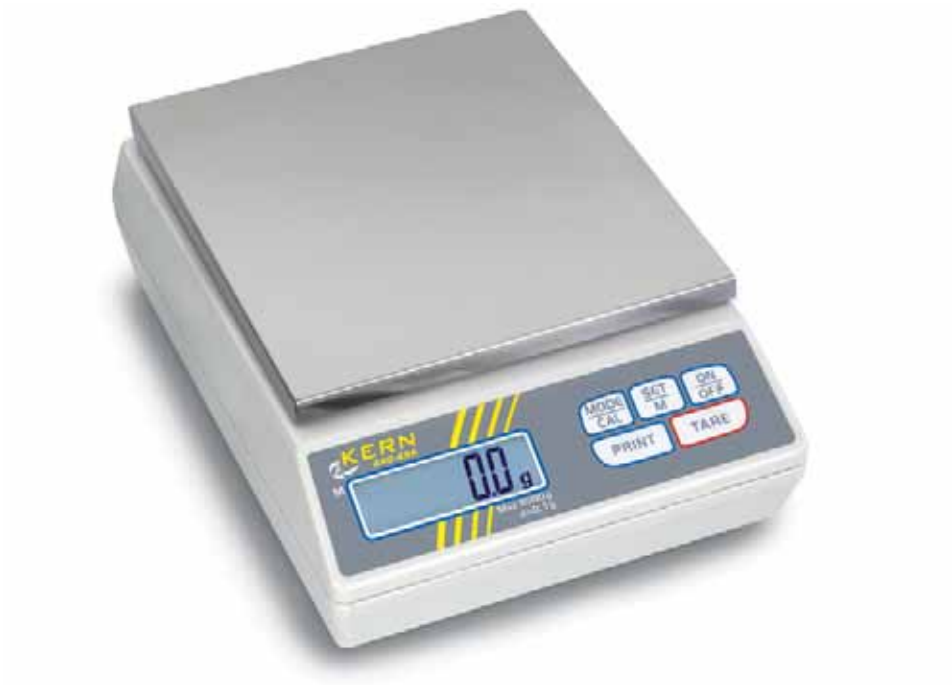
Compact laboratory balance KERN 440




A


B


C

The classic balance in the laboratory

Features

- **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
- **Ring-shaped draught shield** standard, only for models with weighing plate size A, weighing space ØxH 90x40 mm

Technical data

- Backlit LCD display, digit height 15 mm
- Weighing plate dimensions, stainless steel,
  A Ø 81 mm
  B Ø 105 mm
  C WxD 130x130 mm
  D WxD 150x170 mm, see enlarged picture
- Weighing plate material
  A Plastic, with conductive lacquer
  B, C, D Stainless steel
- Optional battery operation, 9 V block, not included. Operating time up to 12 h. AUTO-OFF function to preserve the battery
- Overall dimensions (without draught shield) WxDxH 165x230x80 mm
- Net weight approx. 1 kg
- Permissible ambient temperature 5 °C / 35 °C

Accessories

- **Protective working cover** over keyboard and housing, standard. Can be re-ordered, scope of delivery: 5 items
  for models with weighing plate size
  A KERN 440-210-002S05
  B KERN 440-330-002S05
  C KERN 440-450-002S05
  D KERN 440-530-002S05
- **Rechargeable battery pack internal**, operating time up to 20 h without backlight, charging time approx. 10 h, KERN FCB-A01
- **Second display**, KERN YKD-A01
- **Individual header data:** the free software KERN SHM-01 can be used to set up 4 header lines on the printout for printers YKN-01, 911-013 and YKB-01N
- **Hook for underfloor weighing** of hanging loads, standard, can be reordered, KERN 440-A01
- **RS-232/Ethernet adapter** for connection to an IP-based Ethernet network, for details see page 180, KERN YKI-01
- **Suitable test weights**, also with calibration certificate see page 188
- **Suitable printers** and further, extensive accessories from page 177 ff.

STANDARD

OPTION

Model KERN	Weighing range [Max] g	Readout [d] g	Reproducibility g	Linearity g	Min. piece weight [Counting] g/piece	Weighing plate		Option DAkkS Calibr. Certificate DKD KERN	
440-21A	60	0,001	0,001	± 0,003	0,002	A		963-127	
440-33N	200	0,01	0,01	± 0,02	0,02	B		963-127	
440-35N	400	0,01	0,01	± 0,03	0,02	B		963-127	
440-35A	600	0,01	0,01	± 0,03	0,02	B		963-127	
440-43N	400	0,1	0,1	± 0,2	0,2	C		963-127	
440-45N	1000	0,1	0,1	± 0,2	0,2	C		963-127	
440-47N	2000	0,1	0,1	± 0,2	0,2	C		963-127	
440-49N	4000	0,1	0,1	± 0,3	0,2	D		963-127	
440-49A	6000	0,1	0,1	± 0,3	0,2	D		963-128	
440-51N	4000	1	1	± 2	2	D		963-127	
440-53N	6000	1	1	± 2	2	D		963-128	

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 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 connection.

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 %).

Weighing units: Can be switched to e.g. non-metric units at the touch of a key. See balance model. Please refer to KERN's website for more details.

Weighing with tolerance range: Upper and lower limiting values can be programmed individually for e.g. dosing, sorting and portioning.

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

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
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 force-measurement 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: