

SCHOOL BALANCES

PROFESSIONAL MEASURING



KERN Pictograms

 Internal adjusting Quick setting up of the balance's accuracy with internal adjusting weight (motordriven)	 Interface for second balance For direct connection of a second balance	 Hold function (Animal weighing program) When the weighing conditions are unstable, a stable weight is calculated as an average value	 Conformity Assessment The time required for conformity assessment is specified in the pictogram
 Adjusting program CAL For quick setting up of the balance's accuracy. External adjusting weight required	 Network interface For connecting the scale to an Ethernet network	 Protection against dust and water splashes IPxx The type of protection is shown in the pictogram	 DAkkS calibration possible (DKD) The time required for DAkkS calibration is shown in days in the pictogram
 EasyTouch Suitable for the connection, data transmission and control through PC or tablet	 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	 Suspended weighing Load support with hook on the underside of the balance	 Factory calibration (ISO) The time required for Factory calibration is shown in days in the pictogram
 Memory Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.	 GLP/ISO log intern The balance displays weight, date and time, independent of a printer connection	 Battery operation Ready for battery operation. The battery type is specified for each device	 Package shipment The time required for internal shipping preparations is shown in days in the pictogram
 Alibi memory Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard.	 GLP/ISO log Printer With weight, date and time. Only with KERN printers.	 Rechargeable battery pack Rechargeable set	 Pallet shipment The time required for internal shipping preparations is shown in days in the pictogram
 KERN Universal Port (KUP) allows the connection of external KUP interface adapters, e.g. RS-232, RS-485, SB, Bluetooth, WIFI, Analogue, Ethernet etc. for the exchange of data and control commands, without installation effort	 Piece counting Reference quantities selectable. Display can be switched from piece to weight	 Universal plug-in power supply with universal input and optional input socket adapters for A) EU, CH, GB B) EU, CH, GB, US C) EU, CH, GB, US, AUS	 Plug-in power supply 230V/50Hz in standard version for EU, CH. On request GB, USA or AUS version available
 RS-232 Data interface 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	 Integrated power supply unit 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
 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	 Weighing principle Electromagnetic force compensation Coil inside a permanent magnet. For the most accurate weighings
 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 Single cell technology Advanced version of the force compensation principle with the highest level of precision	
 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 %)		
 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. See balance model. Please refer to KERN's website for more details		
 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		
 Analogue interface to connect a suitable peripheral device for analogue processing of the measurements			

KERN Models A-Z

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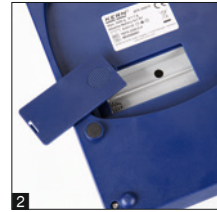
KERN Quick-Finder

How I quickly find the product I am looking for

Ahead of each product group allows you to base the search for a certain target group on weighing data you need such as readout, weighing capacity and main features for each model.

And it's as simple as that – find the product you want in 2 steps:

1. Go to the product group index on page 3
2. Pick the appropriate product group and find the product you want using the Quick-Finder



Perfect school balances for experimental teaching – easy to use, space-saving, stackable

Features

- Simple and convenient 2-key operation, making them ideal for use in schools and universities
- Tare function facilitates formulation work
- Particularly flat design
- Secure and non-slip positioning with rubber feet
- **1** Stackable for space-saving storage
- **2** Practical battery operation using standard batteries ensures a high level of flexibility and freedom from mains adapters, sockets, chargers, etc.

Technical data

- Large LCD display, digit height 15 mm
- Dimensions weighing surface, plastic, WxD 134x127 mm
- Overall dimensions WxDxH 145x205x46,5 mm
- Battery operation, 4x1.5 V AA standard, operating time up to 200 h
- Integrated AUTO-OFF function to preserve the batteries
- Net weight approx. 0,45 kg
- Permissible ambient temperature 10 °C/40 °C

Accessories

- External universal mains adapter, with universal input and optional input socket adapters for EU, CH, GB, US, KERN YKA-27, € 43,-

Note: The models with the suffix -S05 are delivered in a set of 5 units. i.e. the price given in the table refers to 5 items. Cannot be delivered individually. The calibration prices refers to one single balance



Model	Weighing capacity [Max] g	Readability [d] g	Reproducibility g	Linearity g	Quantity delivered (balance)	Price excl. of VAT ex works €	Options	
							DAKkS KERN	Calibr. Certificate €
EFS 500-2	500	0,01	0,01 g	± 0,03	1	120,-	963-127	98,-
EFS 200-1S05	220	0,1	0,1 g	± 0,3	5	190,-	963-127	98,-
EFS 600-1S05	620	0,1	0,1 g	± 0,3	5	200,-	963-127	98,-
EFS 3000-1	3000	0,1	0,1 g	± 0,3	1	100,-	963-127	98,-
EFS 2000-0S05	2200	1	1 g	± 3	5	190,-	963-127	98,-
EFS 5000-0S05	5200	1	1 g	± 3	5	200,-	963-128	118,-



Entry level laboratory balance with tremendous weighing performance

Features

- Simple and convenient 2-key operation
- Tare function facilitates formulation work
- Particularly flat design
- Ready for use: Batteries included
- **A** Ring-shaped draught shield standard, only for models with weighing plate size **A**, weighing space $\phi \times H$ 96×35 mm
- Hook for underfloor weighing standard
- **1** Also available as KERN EMB 500-1BE Black Edition
- Note: With the optional auxiliary set for density determination KERN YDB-04 also well suited for school and teaching operation, see *Accessories*

Technical data

- Large LCD display, digit height 15 mm
- Dimensions weighing surface
 - A** ϕ 82 mm, plastic, with conductive lacquer
 - B** ϕ 105 mm, plastic
 - C** ϕ 150 mm, plastic, see larger picture
- Overall dimensions W×D×H
 - A** 170×244×54 mm
 - B, C** 170×244×39 mm
- Batteries included, 9 V block, respectively 2×1.5 V AA
- Net weight approx. 0,85 kg
- Permissible ambient temperature 5 °C/35 °C

Accessories

- Stainless steel weighing plate, only for models with weighing plate size **B**, KERN EMB-A02, **€ 29,-**
- External universal mains adapter, with universal input and optional input socket adapters for EU, CH, GB, US, KERN YKA-03N, **€ 38,-**
- **2** Ancillary kit for density determination of liquids and solids with density > 1. Scope of supplies: Bridge for holding the beaker (ϕ 102 mm), hook (H 139 mm), KERN YDB-04, **€ 27,-**

STANDARD

CAL EXT UNIT UNDER BATT DMS 1 DAY

OPTION

B MULTI **DAKKS** +3 DAYS

Model	Weighing capacity [Max] g	Readability [d] g	Reproducibility g	Linearity g	Weighing plate	Price excl. of VAT ex works €	Options	
							DAKKS Calibr. DAKKS KERN	Certificate €
KERN EMB 100-3	100	0,001	0,001 g	± 0,005	A	230,-	963-127	98,-
EMB 200-3	200	0,001	0,001 g	± 0,005	A	245,-	963-127	98,-
EMB 200-2	200	0,01	0,01 g	± 0,02	B	140,-	963-127	98,-
EMB 600-2	600	0,01	0,01 g	± 0,03	B	180,-	963-127	98,-
EMB 1000-2	1000	0,01	0,01 g	± 0,05	C	225,-	963-127	98,-
EMB 2000-2	2000	0,01	0,01 g	± 0,05	C	240,-	963-127	98,-
EMB 500-1	500	0,1	0,1 g	± 0,2	C	60,-	963-127	98,-
EMB 500-1BE	500	0,1	0,1 g	± 0,2	C	60,-	963-127	98,-
EMB 1200-1	1200	0,1	0,1 g	± 0,3	C	80,-	963-127	98,-
EMB 3000-1	3000	0,1	0,1 g	± 0,3	C	140,-	963-127	98,-
EMB 6000-1	6000	0,1	0,1 g	± 0,3	C	180,-	963-128	118,-
EMB 2200-0	2200	1	1 g	± 2	C	60,-	963-127	98,-
EMB 5.2K1	5200	1	1 g	± 3	C	60,-	963-128	118,-
EMB 5.2K5	5200	5	5 g	± 10	C	56,-	963-128	118,-



2

School balance with integrated density determination function

Features

- Easy density determination: Thanks to the self-explanatory, graphic-assisted control panel, the density of solids and liquids can be determined in seconds, making them ideal for use in schools and universities. Note: Balance and appropriate set for density determination should be ordered at the same time, see *Accessories*
- Hook for underfloor weighing standard
- Self-explanatory, graphic control panel, the workings steps can be understood immediately, even without operating instructions
 - no learning time = reduces costs
 - ideal for untrained users
 - visualised process avoids operating errors
- The 4 steps are carried out from left to right:
 - 1** Tare the balance by pressing the [TARE] key
 - 2** Select density determination mode (solids/liquids)
 - 3** Weighing of samples/plummet in air
 - 4** Weighing of samples/plummet in liquid.
 The density will be shown on the display right away
- Particularly flat design

Technical data

- Large LCD display, digit height 15 mm
- Dimensions weighing surface, plastic
 - A** \varnothing 82 mm
 - B** \varnothing 150 mm, see larger picture
- Overall dimensions WxDxH 175x250x55 mm
- Batteries included, 9 V block, operating time up to 12 h, AUTO-OFF function preserves the battery
- Net weight approx. 0,85 kg
- Permissible ambient temperature 5 °C/35 °C
- Also with carat weighing unit:
 EMB 200-3V: [Max] 1000 ct/ [d] 0,005 ct
 EMB 2000-2V: [Max] 10000 ct/ [d] 0,05 ct

Accessories

- KERN EMB 200-3V:
- **5** Ancillary kit for density determination of liquids and solids with density > 1. Scope of supplies: Bridge for holding the beaker (\varnothing 102 mm), hook (H 139 mm), KERN YDB-04, **€ 27,-**
 - **6** Set for density determination of liquids and solids with density \leq/\geq 1. Scope of delivery: Weighing plate, beaker (Hx \varnothing 71x51 mm), sample holder, plummet, KERN YDB-01, **€ 270,-**
 - DAKkS-Calibration certificate for the plummet (20 g), KERN 962-335V, **€ 170,-**
- KERN EMB 2000-2V:
- **7** Set for density determination of liquids and solids with density \leq/\geq 1. Scope of delivery: Weighing plate, beaker (Hx \varnothing 135x100 mm), sample holder, plummet KERN YDB-02, **€ 470,-**
 - DAKkS-Calibration certificate for the plummet (200 g), KERN 962-338V, **€ 167,-**
 - Thermometer, KERN YDB-A03, **€ 38,-**

STANDARD

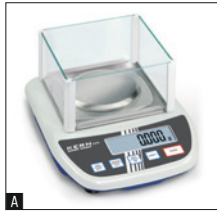
CAL EXT	RS 232	UNIT	UNDER	BATT	MULTI	DMS	1 DAY

OPTION

DAKkS
+3 DAYS

Model	Weighing capacity [Max] g	Readability [d] g	Reproducibility g	Linearity g	Weighing plate	Price excl. of VAT ex works €	Options	
							DAKkS Calibr. Certificate	Dakks KERN €
KERN EMB 200-3V	200	0,001	0,002 g	\pm 0,005	A	275,-	963-127	98,-
KERN EMB 2000-2V	2000	0,01	0,02 g	\pm 0,05	B	275,-	963-127	98,-

2



Entry level model in the low-cost range with large weighing plate

Features

- Especially suitable for use in schools and universities, for example for biology, chemistry, physics
- Large, shock proof weighing plate made of plastic
- Particularly flat design
- Ergonomically optimised key pad with large keys and a high-contrast LCD display
- Secure and non-slip positioning with rubber feet
- Adjusting program CAL for quick setting of the balance accuracy, external test weights at an additional price, see *Test weights*
- **A** Draught shield standard for models with weighing plate size **A**, weighing space W×D×H 145×145×65 mm

Technical data

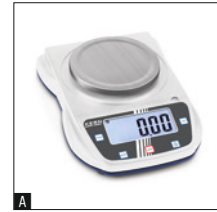
- Large LCD display, digit height 25 mm
- Dimensions weighing surface
 - A** ø 105 mm, plastic, with conductive lacquer
 - B** W×D 175×190 mm, plastic, see larger picture
- Overall dimensions W×D×H 200×280×65 mm
- Optional battery operation, 9 V block not included in scope of delivery, operating time up to 40 h
- Mains adapter external, standard
- Net weight approx. 1,4 kg
- Permissible ambient temperature 5 °C/35 °C

Accessories

- **B** Stainless steel weighing plate, only for models with weighing plate size **B**, KERN EMS-A01, € 33,-

STANDARD										OPTION

Model	Weighing capacity [Max] g	Readability [d] g	Reproducibility g	Linearity g	Weighing plate	Price excl. of VAT ex works €	Options	
							DAKkS KERN	Calibr. Certificate DAKkS €
EMS 300-3	300	0,001	0,002 g	± 0,005	A	305,-	963-127	98,-
EMS 3000-2	3000	0,01	0,02 g	± 0,05	B	265,-	963-127	98,-
EMS 6K0.1	6000	0,1	0,1 g	± 0,3	B	190,-	963-128	118,-
EMS 12K0.1	12000	0,1	0,1 g	± 0,3	B	235,-	963-128	118,-
EMS 6K1	6000	1	1 g	± 3	B	100,-	963-128	118,-
EMS 12K1	12000	1	1 g	± 3	B	105,-	963-128	118,-



2



The compact all-round model with robust stainless steel weighing plate for use in laboratories, industries, and for teaching

Features

- Thanks to its compact, robust design, its bright display and high precision, this range is ideal for use in laboratories, quality control, production as well in schools and universities for teaching e.g. biology, chemistry and physics
- Large, shock proof weighing plate made from stainless steel, can be removed and therefore is hygienic and easy to clean
- **1** Particularly flat design
- Ergonomically-optimised key pad with large keys and a high-contrast LCD screen
- **2** Secure and non-slip positioning with rubber feet
- Level indicator and levelling feet for precise levelling of the scale, fitted as standard, to give the most accurate weighing result
- Adjusting program CAL for quick setting of the balance accuracy using an external test weight at an additional price, see *Test weights*

Technical data

- Large backlit LCD display, digit height 22 mm
- Dimensions weighing surface, stainless steel
 - A** ϕ 105 mm
 - B** WxD 120x120 mm, see larger picture
- Overall dimensions WxDxH 225x160x50 mm
- Optional battery operation, 2x1.5 V AA not included in scope of delivery, operating time up to 70 h
- Mains adapter external, standard
- Net weight approx. 0,50 kg
- Permissible ambient temperature 5 °C/40 °C

Accessories

- US-Plug, KERN YKA-40-US, € 26,-

STANDARD							OPTION	

Model	Weighing capacity [Max] g	Readability [d] g	Reproducibility g	Linearity g	Weighing plate	Price excl. of VAT ex works €	Options	
							DAkks KERN	Calibr. Certificate €
EHA 500-2	500	0,01	0,03 g	± 0,03	A	95,-	963-127	98,-
EHA 500-1	500	0,1	0,3 g	± 0,3	A	70,-	963-127	98,-
EHA 1000-1	1000	0,1	0,3 g	± 0,3	B	75,-	963-127	98,-
EHA 3000-1	3000	0,1	0,3 g	± 0,3	B	95,-	963-127	98,-
EHA 3000-0	3000	1	3 g	± 2	B	70,-	963-127	98,-

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