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Operating instructions
Baby scale

Kojenecká kontrolná váha
KERN MBE(SK)

Version 1.1
09/2009
GB



GB

KERN MBE 20K10

Version 1.1 09/2009

Operating instructions Baby scale

English

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1 Technical data

KERN	MBE 20K10
Read-out (d)	10 g / ¼ oz
Weighing range (max.)	20 kg / 44 lbs
Reproducibility	20 g
Linearity	20 g
Weight units	kg/lb
Recommended calibration weight, (class)	20 kg (M3)
Signal rise time (typical)	2 - 3 s
Warm-up time	10 min
Operating temperature	+ 5°C …. + 35°C
Power supply	Operation with 4 x 1.5 V battery supply, AA type batteries Operation time 200 h
Auto-Off function	After 2 min without load change
Air humidity	max. 80% (non-condensing)
Scale ready for weighing (W x D x H) mm	560 x 350 x 88 mm
Scale plate mm	480 x 270 mm
Total weight kg (net)	2.0 kg

2 Declaration of conformity

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Declaration of conformity

EC-Konformitätserklärung
EC- Déclaration de conformité
EC-Dichiarazione di conformità
EC- Declaração de conformidade
EC-Deklaracja zgodności

EC-Declaration of -Conformity
EC-Declaración de Conformidad
EC-Conformiteitverklaring
EC- Prohlášení o shode
EC-Заявление о соответствии

English

D	Konformitäts-erklärung	Wir erklären hiermit, dass das Produkt, auf das sich diese Erklärung bezieht, mit den nachstehenden Normen übereinstimmt.
GB	Declaration of conformity	We hereby declare that the product to which this declaration refers conforms with the following standards.
CZ	Prohlášení o shode	Tímto prohlašujeme, že výrobek, kterého se toto prohlášení týká, je v souladu s níže uvedenými normami.
E	Declaración de conformidad	Manifestamos en la presente que el producto al que se refiere esta declaración est´´a de acuerdo con las normas siguientes
F	Déclaration de conformité	Nous déclarons avec cela responsabilité que le produit, auquel se rapporte la présente déclaration, est conforme aux normes citées ci-après.
I	Dichiarazione di conformitá	Dichiariamo con ciò che il prodotto al quale la presente dichiarazione si riferisce è conforme alle norme di seguito citate.
NL	Conformiteit-verklaring	Wij verklaren hiermede dat het product, waarop deze verklaring betrekking heeft, met de hierna vermelde normen overeenstemt.
P	Declaração de conformidade	Declaramos por meio da presente que o produto no qual se refere esta declaração, corresponde às normas seguintes.
PL	Deklaracja zgodności	Niniejszym oświadczamy, że produkt, którego niniejsze oświadczenie dotyczy, jest zgodny z poniższymi normami.
RUS	Заявление о соответствии	Мы заявляем, что продукт, к которому относится данная декларация, соответствует перечисленным ниже нормам.

Electronic scale: KERN MBE 20K10

Mark gained	EC Directive	Standards	Title
CE	2004/108/EC	EN 61000-6-3: 2001+A11 EN 55014-1: 2000+A1+A2 EN 55014-2: 1997+A1	EMC Directive

Date: 1.09.2009

Signature:

KERN & Sohn GmbH
Management

3 Basic directions (general information)

3.1 Intended use

The scale is used to determine weight of babies in lying positions and intended for private use only. The use of this scale in health service is forbidden.
To carry out weighing, lay down a child on the scale plate. The weighing value can be read off after a stable weighing value has been obtained.
Before any use, the scale must be checked for correct condition by the authorised person.

Additional information on the baby scale:

Baby scales are intended for weighing babies in lying positions. If a baby is to be weighed in a sitting position, it is to be seated in the centre of the scale pan.



To avoid falls, babies that are on the scale pan should be under continuous observation. Follow the direction placed on the scale pan!



3.2 Inappropriate use

Do not use the scale for dynamic weighing. In the event that small quantities are removed or added to the material to be weighed, incorrect weighing results can be displayed due to the “stability compensation“ in the scale!
(Example: Slowly draining fluids from a container on the scale.)
Do not leave a permanent load on the weighing plate. This can damage the measuring equipment.
Be sure to avoid impact shock and overloading the scale in excess of the prescribed maximum load rating (max.), minus any possible tare weight that is already present. This could cause damage to the scale.
Never operate the balance in hazardous locations. The series design is not explosion-proof.
Construction alterations may not be made to the scale. This can lead to incorrect weighing results, faults concerning safety regulations as well as to destruction of the scale.
The scale may only be used in compliance with the described guidelines. Other areas of application/planned use must be approved by KERN in writing.

3.3 Guarantee

The guarantee shall become void in the event of the following:

- non-observation of our guidelines in the Operating Instructions,
- use outside the described applications,
- alteration to or opening of the device,
- mechanical damage or damage caused by media, liquids,
- usual wear and tear,
- inappropriate erection or electric installation,
- overloading of the measuring equipment,
- allowing the scale to fall down.

3.4 Monitoring the test substances

The metrology features of the balance and any possible available adjusting weight must be checked at regular intervals within the scope of quality assurance. For this purpose, the responsible user must define a suitable interval as well as the nature and scope of this check. Information is available on KERN's home page (www.kern-sohn.com) with regard to the monitoring of balance test substances and the test weights required for this. Test weights and balances can be adjusted quickly and at a reasonable price at KERN's accredited DKD (Deutsche Kalibrierdienst) calibration laboratory (return to national standard).

In the case of the scales for weighing people provided with the scale to determine a body size, it is recommended to carry out the check of its measuring accuracy because determination of the human body size is always connected with a very large inaccuracy.

4 Basic safety directions

4.1 Observing the directions included in the Operating Instructions

Please read these Operating Instructions carefully before erecting and commissioning the balance, even if you already have experience with KERN balances.

4.2 Staff training

The device may only be operated and maintained by trained members of staff.

5 Transport and storage

5.1 Check upon delivery

Please check the packaging immediately upon delivery and the device during unpacking for any visible signs of external damage.

5.2 Packaging

Please keep all parts of the original packaging in case it should be necessary to return items at any time.
Only the original packaging should be used for return shipments.
Before any shipment, disconnect all cables and loose/movable parts.
Install transport protection elements (if any). All parts such as weighing plate, mains adapter, stand, operating panel etc. must be protected against sliding down or damage.

6 Unpacking, installation and starting

6.1 Place of installation, place of use

The scale is designed in such a way that reliable weighing results can be achieved under normal application conditions.
By selecting the correct location for your scale, you will be able to work quickly and precisely.
Therefore, please observe the following when choosing a place of installation:

- Place the scale on a firm, level surface;
- Avoid extreme heat as well as temperature fluctuation caused by installing the scale next to a radiator or in the direct sunlight;
- Protect the scale against direct draughts due to open windows and doors;
- Avoid shaking during weighing;
- Protect the scale against high humidity, vapours and dust;
- Do not expose the device to extreme dampness for longer periods of time. Inadmissible bedewing (condensation of air moisture on the device) can occur if a cold device is taken into a significantly warmer environment. In this case, please keep the device for approx. 2 hours at room temperature after it has been disconnected from mains supply;
- Avoid static charge build-up on the scale and people to be weighed;
- Avoid contact with water.

Major display deviations (incorrect weighing results) are possible if electromagnetic fields occur as well as due to static charging and instable power supply. It is necessary then to change the scale location.

6.2 Unpacking

Carefully remove individual scale parts or the whole scale from its packaging and position the scale in its intended working location. When the mains adapter is used, be careful not to cause the danger of falling over the power cable.

6.2.1 Scale positioning

Pay attention that the scale plate is precisely levelled.

6.2.2 List of items delivered

Standard accessories:

- Operating Instructions
- Batteries (4 x AA 1.5 V)

6.3 Battery operation (inserting and removing batteries)

The battery compartment is located in the scale bottom.
Turn the scale and remove the battery compartment cover. Insert batteries according to polarity (pay attention to the marking in the battery compartment bottom).
Close the battery compartment and turn the scale again.



When the batteries are exhausted, the display will show the „LO" symbol and batteries must be changed.
When the scale is not in use for a longer period of time, remove the batteries and keep them separately. Leakage of battery liquid might damage the scale.

6.4 Initial start-up

To achieve accurate weighing results with the electronic balances, the appropriate operating temperature must be provided for them (refer to „Warm-up time", chapter 1). During the warm-up time, the scale must be switched on.

The accuracy of the scale depends on the local acceleration of the fall.
Please be sure to observe the information included in the chapter on „Adjustment".

6.5 Adjustment

As the acceleration value due to gravity is not the same at every location on earth, each balance must be coordinated - in compliance with the underlying physical weighing principle - to the existing acceleration due to gravity at its place of location (only if the balance has not already been adjusted to the location in the factory). This adjustment process must be carried out during the initial start-up, after change in location and variation of surrounding temperature. It is also recommended to adjust the balance periodically during weighing operation in order to obtain exact measured values.

With the built-in calibration weight (refer to the chapter on „Technical data") it is possible to check and set the scale accuracy at any time.

6.5.1 Procedure when adjusting

Observe stable environmental conditions. The warm-up time (refer to the chapter on „Technical data") is required to ensure the scale stabilisation.

To adjust this baby scale when the scale plate is unloaded and the scale is switched off, press and hold the **ON/OFF** key for 5 seconds until the display shows the **„CAL0"** symbol.
Release the **ON/OFF** key, and the **„20.00 kg"** display will be shown for a moment. Then place the calibration weight of 20 kg carefully in the centre of the scale plate and the adjustment process will be started automatically.
When the adjustment is finished successfully, the display will show the **„F"** symbol for a moment and then the scale will be switched off automatically.

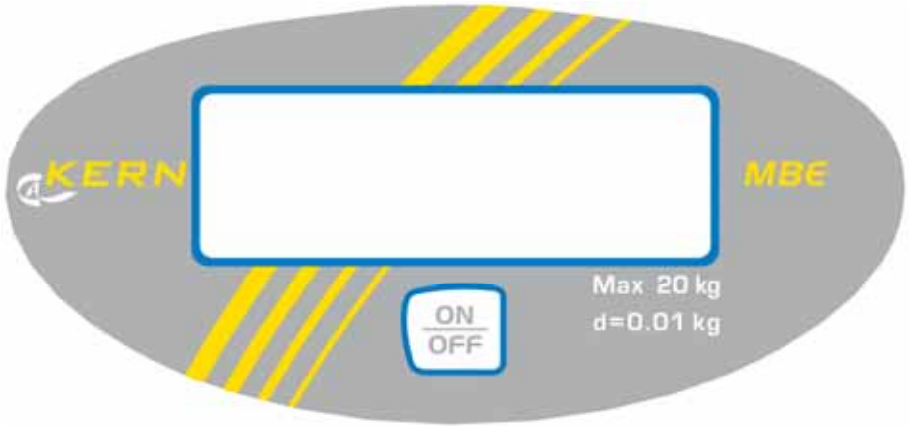
When an error occurs during the adjusting process e.g. because of incorrect weight value, the display will show the **„E"** symbol for a few seconds and then the scale will be switched off automatically. As a result of that the scale is not adjusted.

6.6 Changing weight unit

At the back of the scale (next to the battery compartment) there is the small slide switch which you can use to change weight units between **kg** and **lb**.
When a change is carried out, the display will show the present active weight unit (kg or lb:oz)

7 Operation

7.1 Display



7.2 Handling

The scale is provided with only one key (**ON/OFF**).
The purpose of this key is to switch on the scale, and switch it off by longer holding the pressed key when the scale is switched on.
Height of digits on the 4-position LCD display is 15 mm.

8 Using the scale

1. When batteries are inserted and the **ON/OFF** key is pressed shortly, the test of all display segments is carried out and then the 0.00 display will be shown.
2. Now a baby is to be laid down gently in the centre of the scale pan. Pay attention whether baby feet are towards the rise of the scale pan.
3. When the weight is stable on the scale pan (> 1 kg), the display will flash for a moment and the display value will be held for 12 seconds.
4. If you want to delete the saved value earlier, press the **ON/OFF** key. Then the scale is operated in the normal weighing mode and shows the present weighing value.
5. To switch off the scale, press the **ON/OFF** key for 3 seconds. If the scale is not switched off manually, it is switched off automatically after about 2 minutes without change of the weighing value.

The scale is provided with the automatic taring function:
To weigh a baby without taking into account a weight of a blanket lying on the scale pan, place a blanket or cushion on the scale pan before the scale is switched on. When the scale is switched on, 0.00 value will be displayed and the weight, which was lying on the scale pan before its switching on, will be tared.

9 Error messages

EE: No possibility of displaying the weighing value. It occurs e.g. when a weight is removed after finishing the automatic taring.
Remove a weight, switch off the scale and switch it on again.

10 Service, maintenance, disposal

10.1 Cleaning

Do not use aggressive cleaning agents (solvents or similar agents), but a cloth dampened with mild soap suds or cleaning agent. Ensure that no liquid penetrates into the device and wipe the device with a dry soft cloth.
Loose impurities can be removed carefully by using a brush or hand vacuum cleaner.
Do not tilt or turn the scale to carry out its cleaning because this may result in the scale damage.

Remove any impurities immediately.

10.2 Service, maintenance

The device may only be operated and maintained by trained service technicians who are authorised by KERN.

10.3 Disposal

Disposal of packaging and device must be carried out by an operator according to valid national or regional law of the location where the device is used.

11 Troubleshooting

The scale should be switched off for a short time following an interruption in the program sequence and disconnected from mains supply. It is then necessary to repeat the weighing process from the beginning.

Help:

Interruption	**Possible cause**
Weight display is not illuminated.	• The scale is not switched on. • Batteries are incorrectly inserted or discharged • No batteries.
Weight display changes continuously	• Draught/air movement • Table/floor vibrations • The weighing plate is in contact with foreign matters or is installed incorrectly. • Electromagnetic fields/static charging (choose a different location for the scale, switch off an interfering device if possible)
The weighing result is obviously incorrect	• The scale display is not set to zero • Incorrect adjustment. • Great fluctuations in temperature . • Warm-up time was ignored. • Electromagnetic fields/static charging (choose a different location for the scale, switch off an interfering device if possible)

Should other error messages occur, switch the scale off and then on again. If the error message remains, inform the manufacturer.