

## Digital dynamometer KERN MAP

### PROFESSIONAL CARE



Hand grip dynamometer, e.g. for rehabilitation treatment after accidents

#### Features

- Especially suitable for use in rehabilitation centres for determining manual clamping force
- There are four measuring methods, which for example, as part of a rehabilitation program, help the medical staff to monitor the fitness of the patient's hands and carry out controlled training:
  - Real time mode: immediately shows the client's current strength
  - Peak/Max mode: shows the maximum strength of a client's grip
  - Average mode: Calculates the average strength from two grips
  - Counting mode: Counts the number of presses which exceed a previously defined strength limit
- Designed to reveal reduced hand strength and the risk of morbidity which results from this, for aging people or to expose malnutrition, for example, during chemotherapy or similar treatments
- Safe, comfortable use thanks to non-slip rubber grips
- Integrated AUTO-OFF function after 1 minute to preserve the batteries
- Result displayed in kg or lb
- MAP 80K1S: Special version for children: The small handle depth allows children in particular to easily and ergonomically grip the handles
- MAP 130K1: Special version for body builders: Its design and extended measuring range mean that it offers additional capacity, which can accommodate the higher fundamental force exerted by body builders
- **1** Exchangeable springs facilitate fast switching of the capacity (additional spring sets are included with delivery). The varying rigidity of the individual springs makes the hand grip dynamometer ideal for a wide variety of patient groups, e.g. children or senior citizens or in sports medicine
- **2** Stable case for safe, easy transport and for storage of the additional spring sets, standard, W×D×H 350×265×85 mm

#### Technical data

- LCD display, digit height 12 mm
- Batteries included, 1×CR2450, operating time up to 53 h
- Net weight approx. 0.3 kg

#### STANDARD



Model	Measuring range [Max] kg	Readout [d] kg	Spring sets kg	Overall dimensions W×D×H mm	Option ISO Calibr. Certificate	
					ISO KERN	
KERN						
MAP 80K1S	80	0,1	10, 20, 40, 80	55×88×212	961-167	
MAP 80K1	80	0,1	20, 40, 80	55×102×212	961-167	
MAP 130K1	130	0,1	40, 80, 130	55×102×212	961-167	

## Pictograms

<p><b>Adjusting program CAL:</b> For quick setting up of the balance's accuracy. External adjusting weight required.</p>	<p><b>Hold function:</b> When the weighing conditions are unstable, a stable weight is calculated as an average value.</p>	<p><b>Binocular Microscope:</b> For the inspection with both eyes</p>
<p><b>Data interface RS-232:</b> To connect the balance to a printer, PC or network.</p>	<p><b>Protection against dust and water splashes IPxx:</b> The type of protection is shown in the pictogram</p>	<p><b>Trinocular Microscope:</b> For the inspection with both eyes and the additional option for the connection of a camera</p>
<p><b>RS-485 data interface:</b> To connect the balance to a printer, PC or other peripherals. Suitable for data transfer over large distances. Network in bus topology is possible</p>	<p><b>Stainless steel:</b> The balance is protected against corrosion</p>	<p><b>Abbe Condenser:</b> With high numerical aperture for the concentration and the focusing of light</p>
<p><b>Bluetooth* data interface:</b> To transfer data from the balance to a printer, PC or other peripherals.</p>	<p><b>Suspended weighing:</b> Load support with hook on the underside of the balance.</p>	<p><b>Halogen illumination:</b> For pictures bright and rich in contrast</p>
<p><b>Control outputs (optocoupler, digital I/O):</b> To connect relays, signal lamps, valves, etc.</p>	<p><b>Battery operation:</b> Ready for battery operation. The battery type is specified for each device</p>	<p><b>LED illumination:</b> Cold, energy saving and especially long-life illumination</p>
<p><b>Statistics:</b> using the saved values, the device calculates statistical data, such as average value, standard deviation etc.</p>	<p><b>Rechargeable battery pack:</b> Rechargeable set</p>	<p><b>Fluorescence illumination for compound microscopes:</b> With 100W mercury lamp and filter</p>
<p><b>PC Software:</b> to transfer the measurements from the device to a PC.</p>	<p><b>Battery operation rechargeable</b> Prepared for a rechargeable battery operation</p>	<p><b>Fluorescence illumination for compound microscopes:</b> With 3W LED illumination and filter</p>
<p><b>Wireless data transfer:</b> between the weighing unit and the evaluation unit using an integrated radio module.</p>	<p><b>Universal mains adapter:</b> with universal input and optional input socket adapters for A) EU, GB; C) EU, GB, CH, USA, AUS.</p>	<p><b>Phase contrast unit:</b> For a higher contrast</p>
<p><b>GLP/ISO log:</b> With date and time. Only with KERN printers.</p>	<p><b>Mains adapter:</b> 230V/50Hz in standard version for EU. On request GB, AUS or USA version available.</p>	<p><b>Darkfield condenser/unit:</b> For a higher contrast due to indirect illumination</p>
<p><b>Piece counting:</b> Reference quantities selectable. Display can be switched from piece to weight.</p>	<p><b>Power supply:</b> Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.</p>	<p><b>Polarising unit:</b> To polarise the light</p>
<p><b>Totalising level A:</b> The weights of similar items can be added together and the total can be printed out.</p>	<p><b>Weighing principle: Strain gauges</b> Electrical resistor on an elastic deforming body.</p>	<p><b>Infinity system:</b> Infinity corrected optical system</p>
<p><b>Weighing units:</b> Can be switched to e.g. nonmetric units at the touch of a key. Please refer to website for more details.</p>	<p><b>Peak hold function:</b> capturing a peak value within a measuring process.</p>	<p><b>Automatic temperature compensation:</b> For measurements between 10 °C and 30 °C</p>
<p><b>Weighing with tolerance range:</b> (Check weighing) 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</p>	<p><b>Push and Pull:</b> the measuring device can capture tension and compression forces.</p>	<p><b>Verification possible:</b> The time required for verification is specified in the pictogram.</p>
<p><b>Hold function:</b> When patients do not stand, sit or lie completely still, a stable weight is calculated using an average weight.</p>	<p><b>Integrated scale:</b> In the eyepiece</p>	<p><b>Package shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram.</p>
<p><b>Monocular Microscope:</b> For the inspection with one eye.</p>	<p><b>360° rotatable microscope head</b></p>	<p><b>Pallet shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram.</p>

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