

Digital dynamometer KERN MAP

PROFESSIONAL CARE



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

### Features

- Especially suitable for use in rehabilitation clinics for determining manual clamping force
- There are four measuring methods, for example, as part of a rehabilitation program, help the medical staff to monitor the strength 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
- An ideal device to determine reduced handstrength and a possible mortality risk of elderly persons as well as a malnutrition in case of 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	Readability [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>Memory:</b> Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.</p>	<p><b>ZERO:</b> Resets the display to "0"</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>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>Abbe Condenser:</b> With high numerical aperture for the concentration and the focusing of light</p>
<p><b>Control outputs (optocoupler, digital I/O):</b> To connect relays, signal lamps, valves, etc.</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>Statistics:</b> using the saved values, the device calculates statistical data, such as average value, standard deviation 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>PC Software:</b> to transfer the measurements from the device to a PC</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>GLP/ISO-Protokoll:</b> With date and time. Only with KERN printers</p>	<p><b>Universal mains adapter:</b> with universal input and optional input socket adapters for A) EU, CH; B) EU, CH, GB, USA</p>	<p><b>Fluorescence illumination for compound microscopes:</b> With 3W LED illumination and filter</p>
<p><b>KERN Communication Protocol (KCP):</b> 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</p>	<p><b>Mains adapter:</b> 230V/50Hz in standard version for EU. On request GB, AUS or USA version available</p>	<p><b>Phase contrast unit:</b> For a higher contrast</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>Darkfield condenser/unit:</b> For a higher contrast due to indirect illumination</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>Polarising unit:</b> To polarise the light</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>Infinity system:</b> Infinity corrected optical system</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>Automatic temperature compensation:</b> For measurements between 10 °C and 30 °C</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>Verification possible:</b> The time required for verification is specified 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>Package shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram</p>
		<p><b>Pallet shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram</p>

## Your KERN specialist dealer

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