

## Digital dynamometer KERN MAP

### PROFESSIONAL CARE



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

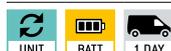
#### Features

- Especially suitable for use in rehabilitation clinics for determining manual clamping force
- There are four measuring methods, which 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
- Designed to reveal reduced hand strength and, among other things, the 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	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

 <b>Adjusting program CAL:</b> For quick setting up of the balance's accuracy. External adjusting weight required.	 <b>ZERO:</b> Resets the display to "0"	 <b>360° rotatable microscope head</b>
 <b>Memory:</b> Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.	 <b>Hold function:</b> When patients do not stand, sit or lie completely still, a stable weight is calculated using an average weight	 <b>Monocular Microscope:</b> For the inspection with one eye.
 <b>Data interface RS-232:</b> To connect the balance to a printer, PC or network	 <b>Hold function:</b> When the weighing conditions are unstable, a stable weight is calculated as an average value.	 <b>Binocular Microscope:</b> For the inspection with both eyes
 <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	 <b>Protection against dust and water splashes IPxx:</b> The type of protection is shown in the pictogram.	 <b>Trinocular Microscope:</b> For the inspection with both eyes and the additional option for the connection of a camera
 <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	 <b>Stainless steel:</b> The balance is protected against corrosion.	 <b>Abbe Condenser:</b> With high numerical aperture for the concentration and the focusing of light.
 <b>Bluetooth® data interface:</b> To transfer data from the balance to a printer, PC or other peripherals	 <b>Suspended weighing:</b> Load support with hook on the underside of the balance.	 <b>Halogen illumination:</b> For pictures bright and rich in contrast.
 <b>Control outputs (optocoupler, digital I/O):</b> To connect relays, signal lamps, valves, etc.	 <b>Battery operation:</b> Ready for battery operation. The battery type is specified for each device.	 <b>LED illumination:</b> Cold, energy saving and especially long-life illumination.
 <b>Statistics:</b> using the saved values, the device calculates statistical data, such as average value, standard deviation etc.	 <b>Rechargeable battery pack:</b> Rechargeable set.	 <b>Fluorescence illumination for compound microscopes:</b> With 100W mercury lamp and filter.
 <b>PC Software:</b> to transfer the measurements from the device to a PC	 <b>Battery operation rechargeable:</b> Prepared for a rechargeable battery operation	 <b>Fluorescence illumination for compound microscopes:</b> With 3 W LED illumination and filter.
 <b>GLP/ISO-Protokoll:</b> With date and time. Only with KERN printers	 <b>Universal mains adapter:</b> with universal input and optional input socket adapters for A) EU, CH B) EU, CH, GB, USA	 <b>Phase contrast unit:</b> For a higher contrast.
 <b>Piece counting:</b> Reference quantities selectable. Display can be switched from piece to weight	 <b>Mains adapter:</b> 230V/50Hz in standard version for EU. On request GB, AUS or USA version available.	 <b>Darkfield condenser/unit:</b> For a higher contrast due to indirect illumination
 <b>Totalising level A:</b> The weights of similar items can be added together and the total can be printed out.	 <b>Power supply:</b> Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request.	 <b>Polarising unit:</b> To polarise the light.
 <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	 <b>Weighing principle: Strain gauges</b> Electrical resistor on an elastic deforming body.	 <b>Infinity system:</b> Infinity corrected optical system.
 <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	 <b>Peak hold function:</b> capturing a peak value within a measuring process.	 <b>Automatic temperature compensation:</b> For measurements between 10 °C and 30 °C
	 <b>Push and Pull:</b> the measuring device can capture tension and compression forces.	 <b>Verification possible:</b> The time required for verification is specified in the pictogram.
	 <b>Integrated scale:</b> In the eyepiece.	 <b>Package shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram.
		 <b>Pallet shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram.

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