

## Digital hand grip dynamometer KERN MAP



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

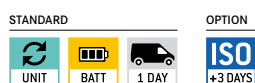
### Features

- 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
- An ideal device to determine reduced handstrength and among others 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
- Weight 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
- 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
- Stable case for safe, easy transport and for storage of the additional spring sets, standard, WxDxH 350x265x85 mm

### Technical data

- LCD Graphic display, digit height 12 mm
- Batteries included, CR2450, operating time up to 53 h
- Net weight approx. 0,35 kg



Model	Measuring range	Readability	Spring sets	Overall dimensions WxDxH mm	Net weight approx. kg	Option ISO Calibr. Certificate ISO KERN
	[Max] kg	[d] g	kg		kg	
<b>KERN MAP 80K1S</b>	80	100	10, 20, 40, 80	55x88x212	0,35	961-102K
<b>MAP 80K1</b>	80	100	20, 40, 80	55x102x212	0,35	961-102K
<b>MAP 130K1</b>	130	100	40,80,130	55x102x212	0,35	961-102K



### Adjusting program CAL:

For quick setting up of the balance's accuracy. External adjusting weight required



### Memory:

Balance memory capacity, e.g. for article data, weighing data, tare weights, PLU etc.



### Data interface RS-232:

To connect the balance to a printer, PC or network



### 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



### Bluetooth\* data interface:

To transfer data from the balance to a printer, PC or other peripherals



### WIFI data interface:

To transfer data from the balance to a printer, PC or other peripherals



### Control outputs

(optocoupler, digital I/O): To connect relays, signal lamps, valves, etc.



### Statistics:

using the saved values, the device calculates statistical data, such as average value, standard deviation etc.



### PC Software:

to transfer the measurements from the device to a PC



### GLP/ISO log:

With date and time. Only with KERN printers



### 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



### Piece counting:

Reference quantities selectable. Display can be switched from piece to weight



### Totalising level A:

The weights of similar items can be added together and the total can be printed out



### Weighing units:

Can be switched to e.g. nonmetric units. Please refer to website for more details



### Weighing with tolerance range

(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



### ZERO:

Resets the display to "0"



### Hold function:

When patients do not stand, sit or lie completely still, a stable weight is calculated using an average weight



### Hold function:

When the weighing conditions are unstable, a stable weight is calculated as an average value



### Protection against dust and water splashes IPxx:

The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989+A1:1999+A2:2013



### Suspended weighing:

Load support with hook on the underside of the balance



### Battery operation:

Ready for battery operation. The battery type is specified for each device



### Rechargeable battery pack:

Rechargeable set



### Battery operation rechargeable

Prepared for a rechargeable battery operation



### Universal plug-in power supply:

with universal input and optional input socket adapters for  
A) EU, CH  
B) EU, CH, GB, USA



### Plug-in power supply:

230V/50Hz in standard version for EU. On request GB, AUS or USA version available



### Integrated power supply unit:

Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or USA on request



### Weighing principle: Strain gauges

Electrical resistor on an elastic deforming body



### Peak hold function:

capturing a peak value within a measuring process



### Push and Pull:

the measuring device can capture tension and compression forces



### Integrated scale:

In the eyepiece



### 360° rotatable microscope head



### Monocular Microscope:

For the inspection with one eye



### Binocular Microscope:

For the inspection with both eyes



### Trinocular Microscope:

For the inspection with both eyes and the additional option for the connection of a camera



### Abbe Condenser:

With high numerical aperture for the concentration and the focusing of light



### Halogen illumination:

For pictures bright and rich in contrast



### LED illumination:

Cold, energy-saving and especially long-life illumination



### Fluorescence illumination for compound microscopes:

With 100 W mercury lamp and filter



### Fluorescence illumination for compound microscopes:

With 3 W LED illumination and filter



### Phase contrast unit:

For a higher contrast



### Darkfield condenser/unit:

For a higher contrast due to indirect illumination



### Polarising unit:

To polarise the light



### Infinity system:

Infinity corrected optical system



### Automatic temperature compensation:

For measurements between 10 °C and 30 °C



### Verification possible:

The time required for verification is specified in the pictogram



### Package shipment:

The time required for internal shipping preparations is shown in days in the pictogram



### Pallet shipment:

The time required for internal shipping preparations is shown in days in the pictogram

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