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

STANDARD: UNIT, BATT, 1 DAY
OPTION: ISO +3 DAYS

Model	Measuring range	Readout	Spring sets	Overall dimensions	Options
	[Max]	[d]		W×D×H	ISO Calibr. Certificate
KERN	kg	g	kg	mm	ISO KERN
MAP 80K1S	80	100	10, 20, 40, 80	55×88×212	961-102K
MAP 80K1	80	100	20, 40, 80	55×102×212	961-102K
MAP 130K1	130	100	40, 80, 130	55×102×212	961-102K

MEDICAL SCALES 2024

KERN Pictograms

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

USB data interface
To connect the balance to a printer, PC or other peripherals

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 (opto-coupler, digital I/O)
To connect relays, signal lamps, valves, etc.

Statistics
sing 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 internal
The balance displays weight, date and time, independent

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, IEC0529:1989+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

Battery operation rechargeable
Prepared for a rechargeable battery operation

Rechargeable battery pack
Rechargeable set

Universal plug-in power supply
with universal input and optional input socket adapters for
A) EU, CH
B) EU, CH, GB, US
C) EU, CH, GB, US, AUS

Plug-in power supply
230V/50Hz in standard version for EU. On request GB, AUS or US version available

Integrated power supply unit
Integrated in balance. 230V/50Hz standard EU. More standards e.g. GB, AUS or US 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

Conformity assessment
The time required for conformity assessment 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