

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



OPTION



Model	Measuring range	Readout	Spring sets	Overall dimensions	Options
	[Max] kg	[d] g		W×D×H mm	ISO Calibr. Certificate 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

CAL EXT
Adjusting program CAL
 For quick setting up of the balance's accuracy. External adjusting weight required

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

RS 232
Data interface RS-232
 To connect the balance to a printer, PC or network

RS 485
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
USB data interface
 To connect the balance to a printer, PC or other peripherals

BT
Bluetooth* data interface
 To transfer data from the balance to a printer, PC or other peripherals

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

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

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

SOFTWARE
PC Software
 to transfer the measurements from the device to a PC

GLP INTERN
GLP/ISO log internal
 The balance displays weight, date and time, independent

GLP PRINTER
GLP/ISO log
 With date and time. Only with KERN printers

KCP PROTOCOL
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

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

SUM
Totalising level A
 The weights of similar items can be added together and the total can be printed out

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

TOL
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
ZERO
 Resets the display to "0"

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

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

IP
Protection against dust and water splashes IPxx
 The type of protection is shown in the pictogram of. DIN EN 60529:2000-09, IEC0529:1989+A1:1999 +A2:2013

UNDER
Suspended weighing
 Load support with hook on the underside of the balance

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

RECHARGE
Battery operation rechargeable
 Prepared for a rechargeable battery operation

ACCU
Rechargeable battery pack
 Rechargeable set

MULTI
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

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

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

DMS
Weighing principle Strain gauges
 Electrical resistor on an elastic deforming body

PEAK
Peak hold function
 capturing a peak value within a measuring process

PUSH/PULL
Push and Pull
 the measuring device can capture tension and compression forces

SCALE
Integrated scale
 In the eyepiece

360°
360° rotatable microscope head

360°
Monocular Microscope
 For the inspection with one eye

BINDO
Binocular Microscope
 For the inspection with both eyes

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

ABBE
Abbe Condenser
 With high numerical aperture for the concentration and the focusing of light

HAL
Halogen illumination
 For pictures bright and rich in contrast

LED
LED illumination
 Cold, energy-saving and especially long-life illumination

FL-HBD
Fluorescence illumination for compound microscopes
 With 100 W mercury lamp and filter

FL-LED
Fluorescence illumination for compound microscopes
 With 3 W LED illumination and filter

PH
Phase contrast unit
 For a higher contrast

DF
Darkfield condenser/unit
 For a higher contrast due to indirect illumination

POLAR
Polarising unit
 To polarise the light

INFINITY
Infinity system
 Infinity corrected optical system

AUTO ATC
Automatic temperature compensation
 For measurements between 10 °C and 30 °C

M +3 DAYS
Conformity assessment
 The time required for conformity assessment is specified in the pictogram

1 DAY
Package shipment
 The time required for internal shipping preparations is shown in days in the pictogram

2 DAYS
Pallet shipment
 The time required for internal shipping preparations is shown in days in the pictogram

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