KERN BALANCES & TEST SERVICES 2022



Crane scale KERN HFD



Robust, high-resolution crane scale up to 12 t, now also with EC type approval [M] or protection type IP67



High mobility thanks to rechargeable battery operation, compact, lightweight construction, it is suitable for the use in several locations (production, warehouse, dispatch department etc.)



Solid shackles, non-revolving



Radio remote control standard. Range up to 20 m. All functions can be selected. W×D×H 65×24×100 mm. Batteries included, 1× 12 V 23A

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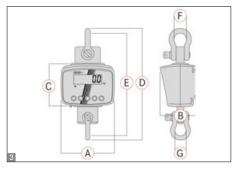
Features

- The models with M add-on have EC type approval and because of this they are ideal for use in verified applications such as, for example, calculation of a total price, based on weight
- The models with IP add-on have special spray and dust protection to IP67 and because of this they are ideal for use in harsh environments
- With the TÜV certification mark, the scales meet the requirements of the standard EN 13155 (Non-fixed load lifting attachments/ Breakage resistance) and EN 61010-1 (Electrical safety)
- Because of its stable construction and robust design, it is ideal for continuous use in industrial environment
- High mobility: thanks to rechargeable battery operation, compact, lightweight construction, it is suitable for the use in several locations (production, warehouse, dispatch department etc.)
- Hold function: When the weighing value remains unchanged the weight indicated on the display is automatically "frozen" until the Hold key is pressed
- Tare: Resets the display to "0" when there is a load on the scale. Now removed or added loads are directly displayed



Technical data

- Superior display size: digit height 30 mm, bright backlight for easy reading of weighing results, even in poor lighting conditions
- Internal rechargeable battery pack, as standard, operating time up to 70 h without back light, charging time approx. 12 h. Battery pack accessible from the outside, which means it is easy to replace
- Precision: 0,2 % of [Max]
- Permissible ambient temperature -10 °C/40 °C



Accessories

- Internal rechargeable battery pack for load support, operating time up to 70 h without backlight, charging time approx. 12 h, KERN HFD-A04
- Charging station for external battery charging, scope of delivery: charging station, exchangeable battery, mains adapter, KERN HFD-A07
- Hook with safety catch, cast steel, galvanised and lacquered, non-revolving, suitable for models
 HFD 600, HFD 1T: KERN HFD-A01

HFD 3T: KERN HFD-A02 HFD 6T, HFD 10T: KERN HFD-A03

• Bluetooth data interface for wireless data transfer to PC or tablets, must be ordered at purchase, KERN HFD-A06

| STANDARD | | | OPTION | FACTORY | RY | | | |
|---------------|------|-------|--------|---------|-----------|---------|--------|---------|
| i 666 | | | | | . | DAkkS | * | Μ |
| CAL EXT IP 67 | ACCU | MULTI | DMS | 1 DAY | 2 DAYS | +3 DAYS | BT 4.0 | +3 DAYS |
| HFD-IP | | | | | HFD-6T-3M | | | HFD-M |

| Model | Weighing capacity | Readability | Net | 3 Dimensions | | | | | - | | Option | | | |
|---|---------------------|------------------------|--------------|--------------|---------|-------|--------|--------|---------|--------------|---------------|--|---------------------------|--|
| | | | weight | | | | | | | | Verification | | DAkkS Calibr. Certificate | |
| | [Max] | [d] | approx. | A | В | С | D | E | F = G | | MU | | DAkkS | |
| KERN | kg | g | kg | mm | mm | mm | mm | mm | mm | | KERN | | KERN | |
| | Triple range | balance switches autor | natically to | the r | iext la | rgest | weigh | ing ca | apacity | [Max] and re | adibility [d] | | | |
| HFD 600K-1 | 150 300 600 | 50 100 200 | 9 | 194 | 129 | 145 | 421 | 383 | 50,8 | | - | | 963-130H | |
| HFD 1T-4 | 300 600 1500 | 100 200 500 | 9 | 194 | 129 | 145 | 421 | 383 | 50,8 | | - | | 963-130H | |
| HFD 3T-3 | 600 1500 3000 | 200 500 1000 | 10 | 194 | 129 | 145 | 421 | 383 | 50,8 | | - | | 963-132H | |
| HFD 6T-3 | 1500 3000 6000 | 500 1000 2000 | 15 | 194 | 129 | 145 | 477 | 426 | 68,3 | | - | | 963-132H | |
| HFD 10T-3 | 3000 6000 12000 | 1000 2000 5000 | 20 | 194 | 129 | 145 | 573 | 510 | 82,5 | | - | | 963-133H | |
| | | Protec | tion agains | t dust | and v | vater | splasł | nes IP | 67 | | | | | |
| HFD 600K-1IP | 150 300 600 | 50 100 200 | 9 | 194 | 129 | 145 | 421 | 383 | 50,8 | | - | | 963-130H | |
| HFD 1T-4IP | 300 600 1500 | 100 200 500 | 9 | 194 | 129 | 145 | 421 | 383 | 50,8 | | - | | 963-130H | |
| HFD 3T-3IP | 600 1500 3000 | 200 500 1000 | 10 | 194 | 129 | 145 | 421 | 383 | 50,8 | | - | | 963-132H | |
| HFD 6T-3IP | 1500 3000 6000 | 500 1000 2000 | 15 | 194 | 129 | 145 | 477 | 426 | 68,3 | | - | | 963-132H | |
| HFD 10T-3IP | 3000 6000 12000 | 1000 2000 5000 | 20 | 194 | 129 | 145 | 573 | 510 | 82,5 | | - | | 963-133H | |
| Note: For applications that require verification, please order verification at the same time, initial verification at a later date is not possible. | | | | | | | | | | | | | | |
| Verification at the factory, we need to know the full address of the location of use. | | | | | | | | | | | | | | |
| HFD 600K-1M | 600 | 200 | 9 | 194 | 129 | 145 | 421 | 383 | 50,8 | | 965-130H | | 963-130H | |
| HFD 1T-4M | 1500 | 500 | 9 | 194 | 129 | 145 | 421 | 383 | 50,8 | | 965-130H | | 963-130H | |
| HFD 3T-3M | 3000 | 1000 | 10 | 194 | 129 | 145 | 421 | 383 | 50,8 | | 965-132H | | 963-132H | |
| HFD 6T-3M | 6000 | 2000 | 15 | 194 | 129 | 145 | 477 | 426 | 68,3 | | 965-132H | | 963-132H | |
| HFD 10T-3M | 12000 | 5000 | 20 | 194 | 129 | 145 | 573 | 510 | 82,5 | | 965-133H | | 963-133H | |

KERN BALANCES & TEST SERVICES 2022

Pictograms

Internal adjusting: Quick setting up of the balance's accuracy with



internal adjusting weight (motordriven)



Adjusting program CAL:

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



Easy Touch:

Suitable for the connection, data transmission and control through PC or tablet.

Memory: MEMORY

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



Alibi memory:

Secure, electronic archiving of weighing results, complying with the 2014/31/EU standard.

Data interface RS-232:

• 6558.• To connect the balance to a printer, PC or RS 232 network



RS-485 data interface:

To connect the balance to a printer, PC or other peripherals. Suitable for datatransfer 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 (optocoupler, digital I/O): To connect relays, signal lamps, valves, etc.



Analogue interface:

to connect a suitable peripheral device for analogue processing of the measurements



Interface for second balance:

KERN – Precision is our business

For direct connection of a second balance



balance calibration.

ment in Europe

Range of services:

characteristics) for test weights

· Calibration of force-measuring devices

Network interface:

For connecting the scale to an Ethernet network

To ensure the high precision of your balance KERN offers you the the appropriate test weight in the international OIML error limit classes E1-M3 from 1 mg - 2500 kg. In combination with a DAkkS calibration certificate the best pre-requisite for proper

The KERN DAkkS calibration laboratory today is one of the most modern and bestequipped DAkkS calibration laboratories for balances, test weights and force-measure-

Thanks to the high level of automation, we can carry out DAkkS calibration of balances, test weights and force-measuring devices 24 hours a day, 7 days a week.

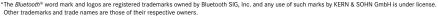
· Volume determination and measuring of magnetic susceptibility (magnetic

· Conformity evaluation and reverification of balances and test weights

· Database supported management of checking equipment and reminder service

· DAkkS calibration certificates in the following languages DE, EN, FR, IT, ES, NL, PL

· DAkkS calibration of balances with a maximum load of up to 50 t · DAkkS calibration of weights in the range of 1 mg - 2500 kg





KCP

PROTOCOL

GLP/ISO log: GI P With weight, date and time. Only with KERN PRINTER printers.

Piece counting:

connection

digital systems GLP/ISO log:

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

KERN Communication Protocol (KCP):

It is a standardized interface command set for

KERN balances and other instruments, which

devices featuring KCP are thus easily integrated

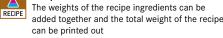
with computers, industrial controllers and other

The balance displays serial number, user ID,

weight, date and time, regardless of a printer

allows retrieving and controlling all relevant parameters and functions of the device. KERN

Recipe level A:



Recipe level B:

Internal memory for complete recipes with name RECIPE and target value of the recipe ingredients. User guidance through display

Totalising level A:

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

Percentage determination:

Determining the deviation in % from the target value (100 %)

Weighing units:

Can be switched to e.g. nonmetric units. See UNIT balance model. Please refer to KERN's website for more details



Weighing with tolerance range:

(Checkweighing) 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

Hold function:

^-(Animal weighing program) When the weighing MOVE conditions are unstable, a stable weight is calculated as an average value



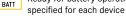
Protection against dust and water splashes IPxx:

The type of protection is shown in the pictogram.

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

Battery operation:







Ready for battery operation. The battery type is

Rechargeable battery pack: Rechargeable set



Universal plug-in power supply:

with universal input and optional input socket MULTI adapters for A) EU, CH, GB; B) EU, CH, GB, USA; C) EU. CH. GB. USA. AUS



Plug-in power supply:

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

Integrated power supply unit:



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

| 1 | DMS |
|---|-----|

Weighing principle: Strain gauges:

| Electrical resistor on an elastic deforming body |
|--|
| |



Weighing principle: Tuning fork:

A resonating body is electromagnetically excited, causing it to oscillate



Weighing principle: Electromagnetic force compensation:

Coil inside a permanent magnet. For the most accurate weighings



Weighing principle: Single cell technology:

DAkkS calibration possible (DKD):

is shown in days in the pictogram

Factory calibration (ISO):

Package shipment:

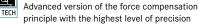
Pallet shipment:

The time required for DAkkS calibration

The time required for Factory calibration

The time required for internal shipping preparations

The time required for internal shipping preparations



Verification possible: The time required for verification is specified in the pictogram

М +3 DAYS

DAkkS

+3 DAYS

ISO

+4 DAYS

1 DAY

ò

2 DAYS

Your KERN specialist dealer: