AXLE LOAD SCALES
KERN Pictograms

**Internal adjusting:** Quick setting up of the balance’s accuracy with internal adjusting weight (motor-driven).

**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.

**Alibi memory:** Electronic archiving of weighing results, complying with the 2009/23/EC standard. For details see page 199

**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. High tolerance against electromagnetic disturbance.

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

**Bluetooth® data interface:** To connect the balance to a printer, PC or other peripherals.

**WLAN data interface:** To transfer data from the balance to a printer, PC or other peripherals.

**Interface for second balance:** For direct connection of a second balance.

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

**Network interface:** For connecting the scale to an Ethernet network. With KERN products you can use a universal RS-232/LAN converter. See page 166

**Wireless data transfer:** Between the weighing unit and the evaluation unit using an integrated radio module.

**GLP/ISO log:** The balance displays the weight, date and time, regardless of a printer connection.

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

**Recipe level A:** Separate memory for the weight of the tare container and the recipe ingredients (net total).

**Recipe level B:** Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display.

**Recipe level C:** Internal memory for complete recipes with name and target value of the recipe ingredients. User guidance through display, multiplier function, adjustment of recipe when dosages are exceeded or barcode recognition.

**User guidance:** Through display.

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

**Totalising level B:** Upper and lower limiting values can be programmed individually for e.g. dosing, sorting and portioning

**Hold function:** (Animal weighing program) 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. For details see page 56.

**ATEX explosion protection:** Suitable for use in hazardous industrial environments, in which there is explosion danger. The ATEX marking is specified for each device.

**Stainless steel:** The balance is protected against corrosion.

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

**Rechargeable battery pack:** Rechargeable set.

**Universal mains adapter:** with universal input and optional input socket adapters for:
A) EU, GB
B) EU, GB, CH, USA
C) EU, GB, CH, USA, AUS

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

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

**Electrical resistor on an elastic deforming body.**

**Weighing principle:** Strain gauges

**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
Advanced version of the force compensation principle with the highest level of precision.

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

**DAkkS calibration possible (DKD):** The time required for DAkkS calibration is shown in days in the pictogram.

**Package shipment:** The time required for internal shipping preparations is shown in days in the pictogram.

**Warranty:** The warranty period is shown in the pictogram.

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KERN – measuring technology and testing services from a single source

Balances & Test service catalogue
Provides a complete overview of the KERN line of balances, test weights, and services such as verification, calibration, etc.

Medical scales catalogue
Complete line of medical scales, from infant scales to patient scales, chair scales and adiposity scales, as well as hand grip dynamometers, chemist’s balances and veterinary scales.

Microscopes & refractometers catalogue
Extensive range in the area of optical instruments, such as, for example, biological microscopes, stereo microscopes, metallurgical microscopes, polarisation microscopes as well as analogue and digital refractometers.

SAUTER measuring equipment catalogue
Test instruments for industry and commerce, such as force, coating thickness, material thickness and calibration service.

DAkkS calibration service brochure
Detailed information on topics pertaining to the calibration and verification of balances, test weights, and force measuring devices.

Your advantages

fast
• 24 hours delivery service – ordered today, on its way tomorrow
• Sales & service hotline available from 8:00 am to 6:00 pm

reliable
• 3 years warranty for balances over € 400,-
• Precision in weighing technology for more than 170 years

competent
• DAkkS accreditation DIN EN ISO/IEC 17025
• Certified QM system DIN EN ISO 9001:2008
• Authorisation for initial verification by the manufacturer 2014/31/EU
• Medical certifications DIN EN ISO 13485 and 93/42/EEC

versatile
• One-stop shopping: from pocket balances through to floor scales – everything from one supplier
• Find the product you want at lightning speed with the “Balance Quick-Finder” at www.kern-sohn.com

Order hotline
+49 [0] 7433 9933-0

Service hotline
+49 [0] 7433 9933-199

Calibration hotline
+49 [0] 7433 9933-196

Our team of consultants will assist you
from Monday to Friday from 8:00 am to 6:00 pm

Online Shop
www.kern-sohn.com

E-mail order
info@kern-sohn.com

Fax order
+49 [0] 7433 9933-146

www.kern-sohn.com
Information on current product availability, product data sheets, user instructions, useful knowledge, technical glossary, images and much for you to download, practical topic areas, which will guide you to the right product in your industry as well as a clever test weight and balance search engine.
Axle load scales

Over the legal limit!

Axle load or wheel load scales are an ideal weighing solution for mobile weighing of trucks, trailers, small aircrafts etc. on a non-verified basis.

Mobile axle load scales are often used to give indicative measurements, in particular on building sites, during harvest time in the agricultural industry or in the field of traffic monitoring, in order to establish whether vehicles are overloaded or incorrectly loaded. If such measurements will show inconsistencies, a second measurement can be carried out on a verified vehicle scale.

Compared with fixed vehicle scales, axle load scales are usually more affordable. They do not require costly installation and with their compact dimensions and low weight they clearly score highly in terms of mobility.

Using the convenient software in the KERN axle load scales, individual axles can be weighed quickly and easily, one after another. When connected, the various weights at the individual wheels, the weight of the axle or the total weight of the vehicle can be displayed and transferred to the printer.

Thanks to its compact design with a depth of just 50 cm and the equalisation platforms, two axles can be weighed individually, even if they are installed to one another.

Alternatively the innovative design of the weighing pad allows 2 axles to be measured at the same time and the results to be added when these 2 axles are installed right next to each other. This double construction is also recommended for vehicles or trailers with exceptionally large wheels.

The modular construction of the KERN VHP facilitates enable a wide... wide range of different combinations and can therefore be adapted quickly to suit the on-site conditions:

- Weighing of trucks, motor homes, trailers etc. for carrying out quick checks of axle weights in any location (Police), to detect and avoid incorrect loading or overloading

- Weighing of tractors, trailers, trucks etc. for products and goods control at the point of receipt or dispatch in locations where there is no permanently installed vehicle scale or one is not available for financial reasons

- Weighing of airplanes to calculate the loading scheme and determine the centre of gravity, to make sure that the permissible total weight is not exceeded and that the load is correctly distributed

Stephan Ade
Product specialist Axle load scales
Tel. +49 (0) 7433 9933 - 121
Fax +49 (0) 7433 9933 - 29121
ade@kern-sohn.com

Quick-Finder Axle load scales

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<tr>
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<tbody>
<tr>
<td>10 kg</td>
<td>15000 kg</td>
<td>VHP 15T-2</td>
<td>5900,-</td>
<td>130</td>
</tr>
<tr>
<td>5 kg</td>
<td>6000 kg</td>
<td>VHP 6T-3</td>
<td>5900,-</td>
<td>130</td>
</tr>
</tbody>
</table>

For an explanation on the pictos, see the front flap

● = standard ○ = option
Modular axle load scale for the mobile monitoring of vehicles up to 15 tons

Asynchronous weighing of individual axles
Order example: standard package VHP 6T-3 or VHP 15T-2, see table on the right

Asynchronous weighing of double axles which are installed next to each other, using compensation pads
Order example: standard package VHP 6T-3 or VHP 15T-2, see table on the right, 4× ascending ramp VHP-A01, 2× compensation pad VHP-A03

Simultaneous weighing of double axles, e.g. of a trailer
Order example: standard package VHP 15T-2, see table on the right, 4× ascending ramp VHP-A01, 2× weighing pad KHP 75000V20LM

Weighing of airplanes
Order example: 1× display device VHP-T, 1× weighing pad KHP 3000V20LM, 2× ascending ramp VHP-A01

€ 6890,- now: € 5900,-
Axle load scale KERN VHP

Features

- Mobile axle load scale for rapid monitoring of vehicles. Space-saving and affordable. Ideal for mobile police or customs checks, on landfill sites, gravel works, biogas plants etc.
- Display device with integrated thermal transfer printer and rechargeable battery pack in stable, lined transport case standard.
- 4 quick-release connectors to connect up to 4 weighing pads. The weighing results from the individual weighing pads can be issued individually or cumulatively.

Display device can be re-ordered, KERN VHP-T, € 1900,-

- Weighing pad (wheel load plate) extremely resistant to bending because of its high material thickness. Particularly flat design, only 35 mm. Brackets for access ramps and spacer plates on both sides, and therefore quickly expendable
- 2 rollers and 2 handles for easy transport of the weighing pad
- 6 load cells, steel, silicone-coated, IP67
- Scope of supply:
  - 2 weighing pads (wheel load plates)
  - 4 access ramps
  - 1 display device in stable transport case

Technical data

- Backlit LCD graphic display, digit height 10 mm
- Weighing plate dimensions, coated metal, W×D×H 900×500×35 mm
- Dimensions of display device W×D×H 370×280×160 mm
- Net weight for each weighing pad approx. 30.2 kg
- Net weight of each access ramp approx. 1.2 kg
- Net weight display device (case) approx. 9.2 kg
- Rechargeable battery pack internal, operating time up to 13 h without backlight, charging time approx. 12 h
- Cable length of display device approx. 10 m
- Permissible ambient temperature -40 °C/70 °C

Accessories

- Ascending ramp, extremely resistant rubber compound, dimensions W×D×H 900×250×35 mm, KERN VHP-A01, € 220,-
- Ramp extension, extremely resistant rubber compound, dimensions W×D×H 900×545×35 mm, KERN VHP-A02, € 330,-
- Compensation pad, extremely resistant rubber compound, dimensions W×D×H 900×545×35 mm, KERN VHP-A03, € 330,-
- Thermal receipt rolls, 10 pieces, dimensions W×L 57×18000 mm, ∅ 51 mm, KERN RFS-A10, € 40,-
- DAkkS calibration certificate (for both pads), see table. DAkkS calibration certificate for one pad, see page 192, KERN 963-132 respectivement 963-133

Note: The standard scope of supplies (see technical data) can be expanded with further weighing pads, ramp extensions and balancing platforms (see accessories) and in this way the system can be adapted to cover a wide range of applications. Do you have any questions or special requests? Your KERN product specialist will be happy to help.

STANDARD OPTION

<table>
<thead>
<tr>
<th>Model</th>
<th>Weighing range</th>
<th>Readout</th>
<th>Weighing pads included with delivery</th>
<th>Price excl. of VAT ex works</th>
<th>Option</th>
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<tbody>
<tr>
<td></td>
<td>[Max]</td>
<td>[d]</td>
<td>[Max]</td>
<td>kg</td>
<td>kg</td>
</tr>
<tr>
<td>VHP 6T-3</td>
<td>6000</td>
<td>5</td>
<td>2 × 3000</td>
<td>5900,-</td>
<td>€ 963-132A 880,-</td>
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<tr>
<td>VHP 15T-2</td>
<td>15000</td>
<td>10</td>
<td>2 × 7500</td>
<td>5900,-</td>
<td>€ 963-133A 1000,-</td>
</tr>
</tbody>
</table>

Note: Only while stocks last !

Price reduction
We will produce your ideal scale. Combine KERN display devices with platforms, weighing bridges or load receptors in accordance with your individual requirements. KERN will deliver the complete system to you – with DAkkS calibration certificate or conformity evaluation, if required.

Fabian Brenner,
Technical Service
Tradition and innovation for more than 170 years

An independent family business, KERN since already 7 generations is synonymous with quality and reliability in customer service.

- **1844**: KERN is founded – precision balances are produced
- **1863**: A proud Gottlieb Kern with his staff
- **1880**: Pharmaceutical balance with Aesculap
- **1923**: Inflation – KERN wages are paid with self printed currency
- **1980**: The electronic balance ousts mechanical devices
- **1994**: Accredited DKD laboratory (ISO 17025)
- **2000**: New premises in Balingen
- **2002**: Existing QM system certification in accordance with DIN EN ISO 9001:2000 standards
- **2007**: Approval for the manufacture of medical products (DIN EN 13485 and 93/42/EEC)
- **2008**: Authorisation for initial verification by the manufacturer (2009/23/EU)
- **2009**: Approval for the manufacture and sale of height rods (DIN EN 13485 and 93/42/EEC)
- **2012**: Verification point for non-automatic balances and test weights.
  
  New customer portal www.kern-sohn.com goes live
- **2014**: Expansion of the product range to include optical instruments (microscopes and refractometers)
- **2015**: Inauguration of Ziegelei 2.0 with computer-controlled high-bay warehouse