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# Operating Manual Pallet truck scales

## KERN VHE

Version 1.0  
09/2008  
GB



VHE-BA-e-0810



# KERN VHE

Version 1.0 09/2008

## Operating instructions Pallet truck scale

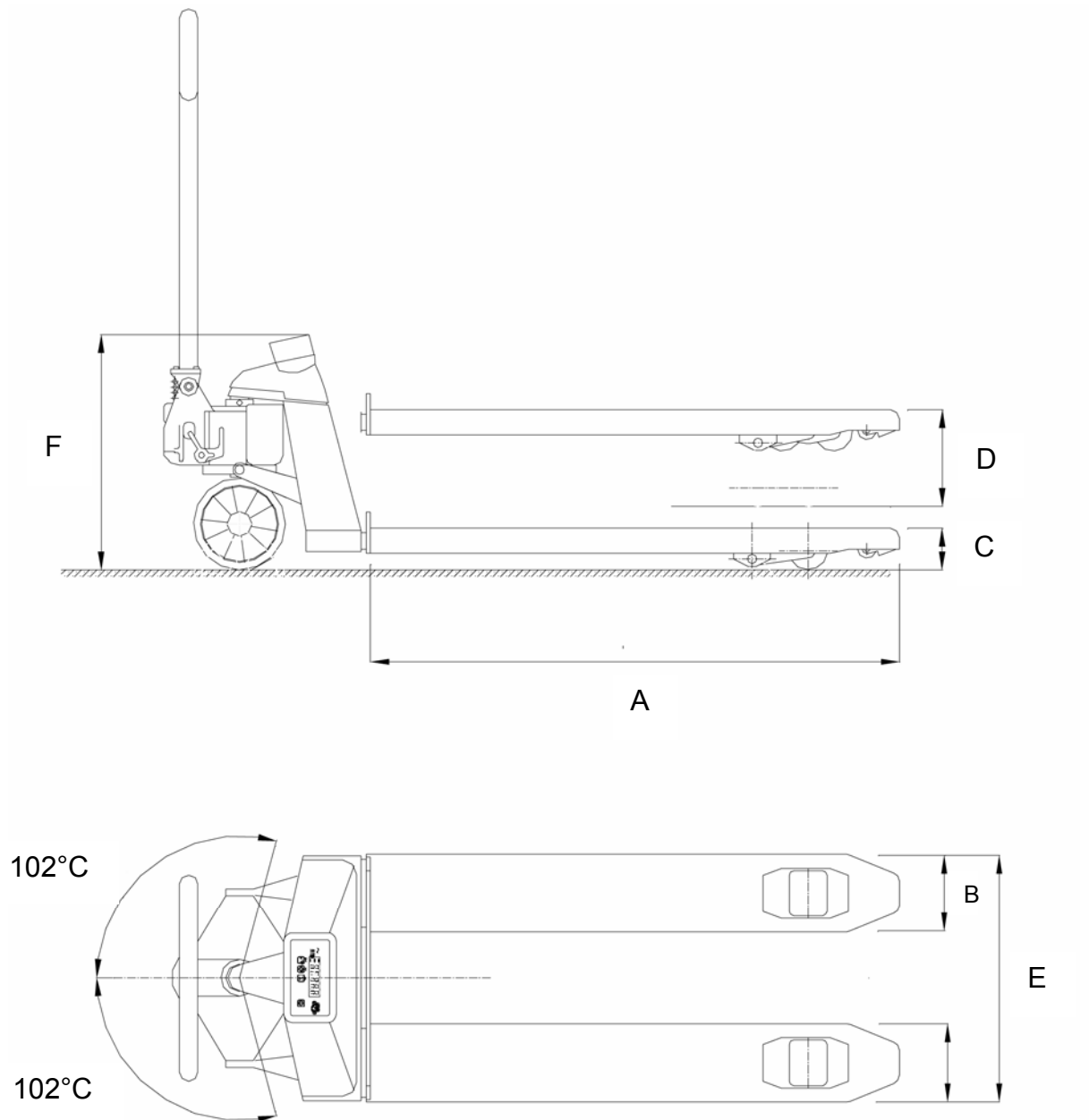
### Table of Contents

<b>1</b>	<b>TECHNICAL DATA</b> .....	<b>3</b>
1.1	Dimensions .....	4
<b>2</b>	<b>DECLARATION OF CONFORMITY</b> .....	<b>5</b>
<b>3</b>	<b>BASIC INSTRUCTIONS FOR SCALES</b> .....	<b>6</b>
3.1	Proper use.....	6
3.2	Improper Use .....	6
3.3	Warranty .....	6
3.4	Monitoring of Test Resources.....	7
<b>4</b>	<b>BASIC SAFETY INSTRUCTIONS FOR SCALES</b> .....	<b>7</b>
4.1	Pay attention to the instructions in the Operation Manual .....	7
4.2	Personnel training.....	7
<b>5</b>	<b>TRANSPORTATION &amp; STORAGE</b> .....	<b>7</b>
5.1	Testing upon acceptance .....	7
5.2	Packaging.....	7
<b>6</b>	<b>UNPACKING AND ERECTION</b> .....	<b>7</b>
6.1	Site of installation, place of operation for scales .....	7
6.2	Scope of delivery.....	8
<b>7</b>	<b>COMMISSIONING</b> .....	<b>9</b>
7.1	Weighing .....	9
7.2	Taring.....	11
7.3	Battery operation.....	12
<b>8</b>	<b>DISPLAY UNIT</b> .....	<b>13</b>
8.1	Overview of display.....	13
8.2	Keyboard overview.....	13
<b>9</b>	<b>SERVICE, MAINTENANCE, DISPOSAL</b> .....	<b>14</b>
9.1	Cleaning .....	14
9.2	Service, maintenance.....	14
9.3	Disposal.....	14
<b>10</b>	<b>INSTANT HELP</b> .....	<b>15</b>

## 1 Technical Data

<b>KERN</b>	<b>VHE 2T5</b>
Readability (d)	5 kg
Weighing range (max)	2200 kg
Reproducibility	10 kg
Linearity	± 10 kg
Stabilization time	3 sec.
Allowable ambient temperature	-10° C .... + 40° C
Humidity of air	max. 95 % (not condensing)
Weighing unit	kg
Electric Supply	4 x 1.5V AA batteries
Operating period	80 h
Auto Off	3 min
Net weight	58 kg

### 1.1 Dimensions



A	Fork length	1 150 mm
B	Fork width	150 mm
C	Minimum fork height	83 mm
	Clearance	30 mm
D	Maximum fork height	205 mm
	Hoisting height	122 mm
E	Width across forks	520 mm
F	Height upper edge of display	545 mm

## 2 Declaration of conformity



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### Declaration of conformity

EC-Konformitätserklärung  
EC- Déclaration de conformité  
EC-Dichiarazione di conformità  
EC- Declaração de conformidade  
EC-Deklaracja zgodności

EC-Declaration of -Conformity  
EC-Declaración de Conformidad  
EC-Conformiteitverklaring  
EC- Prohlášení o shode  
ЕС-Заявление о соответствии

<b>D</b>	Konformitäts- erklärung	Wir erklären hiermit, dass das Produkt, auf das sich diese Erklärung bezieht, mit den nachstehenden Normen übereinstimmt.
<b>GB</b>	Declaration of conformity	We hereby declare that the product to which this declaration refers conforms to the following standards.
<b>CZ</b>	Prohlášení o shode	Tímto prohlašujeme, že výrobek, kterého se toto prohlášení týká, je v souladu s níže uvedenými normami.
<b>E</b>	Declaración de conformidad	Manifetamos en la presente que el producto al que se refiere esta declaración está de acuerdo con las normas siguientes
<b>F</b>	Déclaration de conformité	Nous déclarons avec cela responsabilité que le produit, auquel se rapporte la présente déclaration, est conforme aux normes citées ci-après.
<b>I</b>	Dichiarazione di conformità	Dichiariamo con ciò che il prodotto al quale la presente dichiarazione si riferisce è conforme alle norme di seguito citate.
<b>NL</b>	Conformiteit- verklaring	Wij verklaren hiermede dat het product, waarop deze verklaring betrekking heeft, met de hierna vermelde normen overeenstemt.
<b>P</b>	Declaração de conformidade	Declaramos por meio da presente que o produto no qual se refere esta declaração, corresponde às normas seguintes.
<b>PL</b>	Deklaracja zgodności	Niniejszym oświadczamy, że produkt, którego niniejsze oświadczenie dotyczy, jest zgodny z poniższymi normami.
<b>RUS</b>	Заявление о соответствии	Мы заявляем, что продукт, к которому относится данная декларация, соответствует перечисленным ниже нормам.

### Electronic Scale: KERN VHB, VHE, VHS, VHT

Mark applied	EU Directive	Standards
<b>CE</b>	2004/108/EC	EN 55022 :1994 /A1 : 1995/A2 : 1997 Class A EN 50082-1 : 1992 EN 61000-3-2 : 1995/A1: 1998 / A2:1998 EN 61000-3-3 : 1995
	2006/95/EC	EN 60950 : 1992/A1: 1993 / A3: 1995 / A4: 1997 / A11: 1997

Date: 24.09.2008

Signature: \_\_\_\_\_

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Management

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### 3 Basic instructions for scales

#### 3.1 Proper use

The balance you purchased is intended to determine the weighing value of material to be weighed. It is intended to be used as a “non-automatic” balance, i.e. the material to be weighed is manually and carefully placed in the centre of the weighing plate. As soon as a stable weighing value is reached the weighing value can be read.

#### 3.2 Improper Use

Do not use balance for dynamic weighing. In the event that small quantities are removed or added to the material to be weighed, incorrect weighing results can be displayed due to the “stability compensation” in the balance. (Example: Slowly draining fluids from a container on the balance.)

Do not leave permanent load on the weighing plate. This may damage the measuring system.

Impacts and overloading exceeding the stated maximum load (max) of the balance, minus a possibly existing tare load, must be strictly avoided. Balance may be damaged by this.

Never operate balance in explosive environment. The serial version is not explosion protected.

The structure of the balance may not be modified. This may lead to incorrect weighing results, safety-related faults and destruction of the balance.

The balance may only be used according to the described conditions. Other areas of use must be released by KERN in writing.

#### 3.3 Warranty

Warranty claims shall be voided in case

- Our conditions in the operation manual are ignored
- The appliance is used outside the described uses
- The appliance is modified or opened
- Mechanical damage and damage caused by media, liquids
- Natural wear and tear
- The appliance is improperly set up or incorrectly electrically connected
- The measuring system is overloaded

### **3.4 Monitoring of Test Resources**

In the framework of quality assurance the measuring-related properties of the balance and, if applicable, the testing weight, must be checked regularly. The responsible user must define a suitable interval as well as type and scope of this test. Information is available on KERN's home page ([www.kern-sohn.com](http://www.kern-sohn.com)) with regard to the monitoring of balance test substances and the test weights required for this. In KERN's accredited DKD calibration laboratory test weights and balances may be calibrated (return to the national standard) fast and at moderate cost.

## **4 Basic safety instructions for scales**

### **4.1 Pay attention to the instructions in the Operation Manual**

Carefully read this operation manual before setup and commissioning, even if you are already familiar with KERN balances.

### **4.2 Personnel training**

The appliance may only be operated and maintained by trained personnel.

## **5 Transportation & Storage**

### **5.1 Testing upon acceptance**

When receiving the appliance, please check packaging immediately, and the appliance itself when unpacking for possible visible damage.

### **5.2 Packaging**

Keep all parts of the original packaging in case you need to return the appliance. Only use original packaging for returning. Before sending, disconnect all connected cables and loose/movable parts.

## **6 Unpacking and erection**

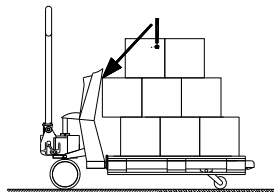
### **6.1 Site of installation, place of operation for scales**

The balances are designed in a way that reliable weighing results are achieved in common conditions of use.

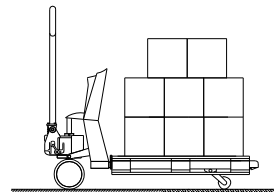
You will work accurately and fast, if you select the right location for your balance.

## On the installation site observe the following:

- The load must be lifted clear of the display unit's case and other pallets.



Incorrect lifting of a load



Correct lifting of a load

- The load must be lifted evenly distributed, so that it has the lowest measurement insecurity (deviations up to 0.8% of the capacity may occur).
- Inclined position of the weighing system can falsify the weighing result. Holes and unevenness, too, have this effect. A smooth floor is ideal.
- Optimum accuracy in weighing results is achieved if the load centre is between the forks. The forks are easily bent and twisted when the load is off-centre. This may result in diminished accuracy.
- Avoid jarring during weighing
- Protect the balance against high humidity, vapours and dust
- Do not expose the device to extreme dampness for longer periods of time. Non-permitted condensation (condensation of air humidity on the appliance) may occur if a cold appliance is taken to a considerably warmer environment. In this case, acclimatize the disconnected appliance for ca. 2 hours at room temperature.
- Major display deviations (incorrect weighing results) may be experienced should electromagnetic fields (e.g. due to mobile phones or radio equipment), static electricity accumulations or instable power supply occur. Change location or remove source of interference.

## 6.2 Scope of delivery

Serial accessories:

- Pallet truck scales
- 4 x 1.5V AA batteries
- Operating Manual

## 7 Commissioning

### 7.1 Weighing



**Correct weighing only possible at „reference height“  
(see fig. 1)**

- ⇒ Actuate repeatedly the lifting device (hand lever **1** downwards) until the reference height is reached. For this the pin (**2**) must be in **even** position, detailed information see fig.2.



Fig. 1


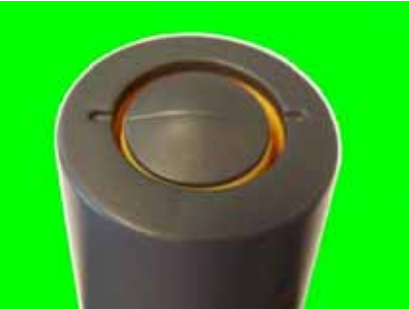



	<p><b>Wrong weighing result</b></p>
	<p><b>Correct weighing result only on reference height</b></p>
	<p><b>Wrong weighing result</b></p>

Fig. 2

⇒ Press  to switch on the pallet truck scale and the balance will execute a self-test.



⇒ Set to zero using  button.

⇒ Lower the pallet truck scale.



⇒ Move under the pallet and for weight determination lift again to reference height (see fig. 1).


**Observe „reference height“ without fail, in case of non-observation wrong weighing results will appear.**

⇒ Read weighing result



## 7.2 Taring

⇒ Lift weighing container till to the reference height (see chap. 6.1, fig. 1).

⇒ Switch on pallet truck scale using  button. The weight of the weighing container is displayed.

57 kg

⇒ Tare using  button.


0 kg

⇒ Fill material to be weighed in the container, the net weight is displayed.

807 kg

⇒ If the container is removed from the balance, the tare weight is displayed as a negative value. The tare

-57 kg

weight remains stored until the  button is pressed anew or the balance is switched off.

### 7.3 Battery operation

Power is supplied via 4 x 1,5V AA batteries. At a regular use with full batteries, approx. 1 year can be weighed.

If „LO-BA“ is displayed on the screen, the capacity of the battery will soon be exhausted. Change the batteries immediately.

If the capacity of the batteries is completely exhausted, the display will switch-off automatically.

In order to save the battery, the balance switches automatically off after 3 minutes without load changing.

If the balance is not used for a longer time, take out the batteries and store them separately. Leaking battery liquid could damage the balance.

Change the battery as follows:



1. Detach the fastening screws of the display unit



2. Remove batteries



3. Insert new batteries



4. Screw again display unit onto the support

## 8 Display Unit



Front view Display unit





### 8.1 Overview of display

The following messages may appear on the display:

- HELP 1** Weighing system overloaded
- HELP 2** Taring impossible due to negative gross weight
- HELP 3** Negative signal of the measuring cell to A-D converter
- HELP 7** The signal of the measuring cell on the A-D converter is too high.
- LO-BA** the battery level is too low; batteries should be changed.

### 8.2 Keyboard overview

Each button provides an operating as well as an adjustment function.

	<b>Operating function</b>	<b>Adjustment function</b>
	Zeroing	Confirm and segment to the left
		Decrease value
		Increase value
	On / Off	Delete

## 9 Service, maintenance, disposal

### 9.1 Cleaning

Please do not use aggressive cleaning agents (solvents or similar agents), but a cloth dampened with mild soap suds. Take care that the device is not penetrated by fluids and polish it with a dry soft cloth.

### 9.2 Service, maintenance

The appliance may only be opened by trained service technicians who are authorized by KERN.

The same maintenance guidelines as for standard manual lift truck without load-display system.

General rules:

- Pulling instead of pushing allows an easier handling of the load (steering wheels on the side of the drawbar)
- If the lifting device is not used, the manual lever should be left in centre position. This prolongs the life span of the seals.
- The display unit should only be cleaned with a damp cloth. Chemical cleaning agents and a pressurized water jet cause damage.
- To prevent damages to the electronic system and weighing cells it is necessary that welding work on the entire weighing system is carried out exclusively by technical specialists.
- The bearings of the wheels as well as the joints in the load roller section should be regularly cleaned and greased.

### 9.3 Disposal

Disposal of packaging and appliance must be carried out by operator according to valid national or regional law of the location where the appliance is used.

## 10 Instant help

In case of an error in the program process, briefly turn off the balance and disconnect from power supply. The weighing process must then be restarted from the beginning.

Help:

### Fault

### Possible cause

The displayed weight does not glow.

- The balance is not switched on.
- The batteries are empty

The displayed weight is permanently changing

- Draught/air movement

-

- Sites with vibration.
- The fork is in contact with foreign matter.
- Electromagnetic fields / static charging (choose different location/switch off interfering device if possible)

The weighing value is obviously wrong

- The display of the balance is not at zero
- Adjustment is no longer correct.
- Great fluctuations in temperature.
- Electromagnetic fields / static charging (choose different location/switch off interfering device if possible)
- The balance is not on reference height.

Should other error messages occur, switch balance off and then on again. If the error message remains inform manufacturer.