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Operating manual
Pallet truck scales

Paletový vozík s váhou
KERN VFB(SK)

Version 1.0
07/2013
GB



VFB-BA-e-1310

GB

KERN VFB

Version 1.0 07/2013

Operating instructions Pallet truck scale

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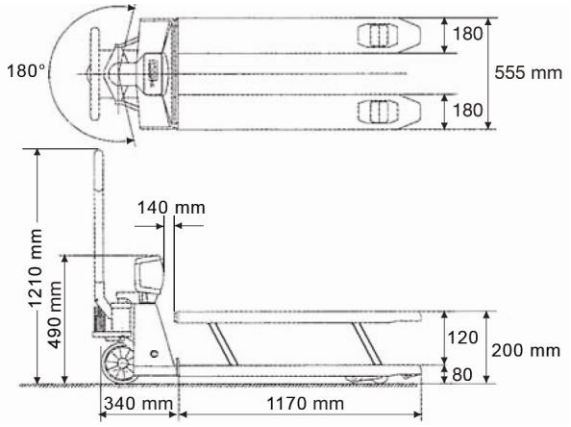
English

1 Technical data

KERN	VFB 2T-3
Readability (d)	1 kg
Weighing range (max)	2000 kg
Reproducibility	1 kg
Linearity	± 2 kg
Warm-up time	10 min
Recommended adjustment weight (not added) class	1 t (M1)
Allowable ambient temperature	-10° C .... + 40° C
Humidity of air	max. 95 % (not condensing)
Weighing Units	kg, lb
Electric Supply	110V-230V AC 12 V, 500 mA
Rechargeable battery	7.2 V 2000 mAh Operating period background illumination OFF: 40h Service life background illumination ON: 20h Loading time: 12 h
Auto Off	Options: 0, 3, 5, 10, 30 min
Net weight	126 kg
Fork height	max: 200 mm min: 85 mm
LCD-display cipher height	22 mm

English

Dimensions in mm:



2 Basic instructions about weighing system

2.1 Proper use

The weighing system 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 loading fork. As soon as a stable weighing value is reached the weighing value can be read.

English

2.2 Improper Use

The weighing system is not suitable 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 weighing system. (Example: Slowly draining fluids from a container on the weighing system.)
Do not leave permanent load on the loading fork. This may damage the measuring system.
Impacts and overloading exceeding the stated maximum load (max) of the weighing system, minus a possibly existing tare load, must be strictly avoided. The weighing system could be damaged.
Never operate the weighing system in an explosive environment. The serial version is not explosion protected.
Changes to the weighing system's design are not permitted. This may lead to incorrect weighing results, safety-related faults and destruction of the weighing system.
The weighing system unit may only be operated in accordance with the described default settings. Other areas of use must be released by KERN in writing.

2.3 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
- Improper setup or incorrect electrical connection
- The measuring system is overloaded

2.4 Monitoring of Test Resources

In the framework of quality assurance the measuring-related properties of the weighing system 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) 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.

3 Basic safety notes about weighing system

3.1 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.

All language versions contain a non-binding translation.

The original German is binding.

3.2 Personnel training

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

4 Transport and storage

4.1 Testing upon acceptance

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

4.2 Packaging / return transport



- ⇨ Keep all parts of the original packaging for a possibly required return.
- ⇨ Only use original packaging for returning.
- ⇨ Prior to dispatch disconnect all cables and remove loose/mobile parts.
- ⇨ Reattach possibly supplied transport securing devices.
- ⇨ Secure all parts such as the glass wind screen, the weighing platform, power unit etc. against shifting and damage.

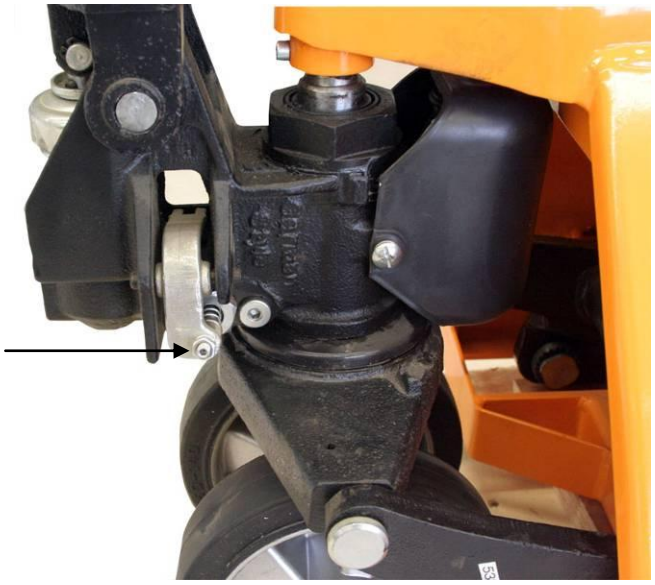
5 Unpacking, Setup and Commissioning

5.1 Assembly of the pallet truck scale

5.1.1 Drawbar

The drawbar is delivered separated from the hydraulic lifting device. Prior to commissioning the two components must be connected to each other. Details see below.

⇨ Loosen the screw for adjustment of hydraulics



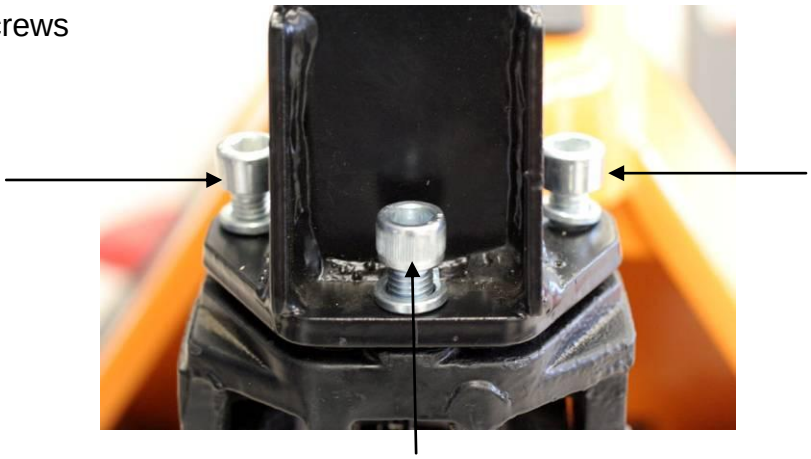
⇨ Pass the draw chain of the drawbar through the opening and after that through the bolt in the pallet truck scale





English

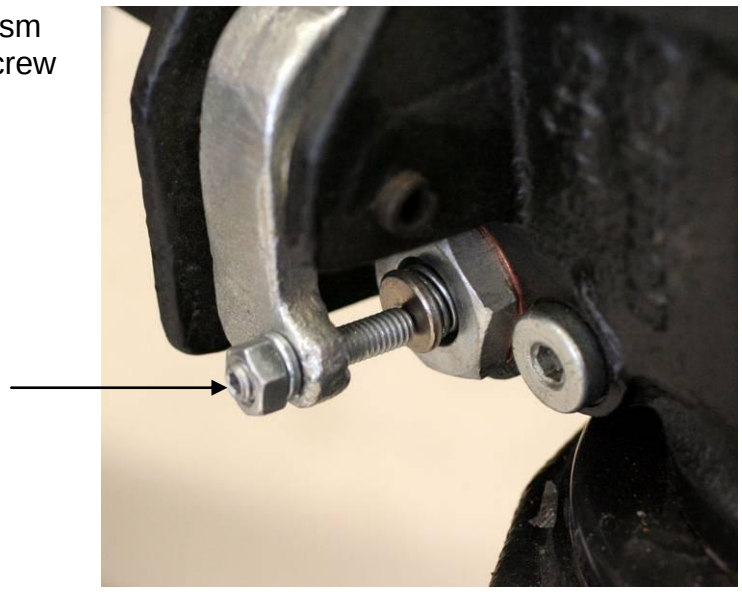
⇨ Fix the grab handle using 3 screws



⇨ Insert rod at the lower end of the draw chain at the oblong hole of the hydraulic lever till to the stopper



⇨ To start-up the lifting mechanism screw down the adjustment screw till to the preset stopper



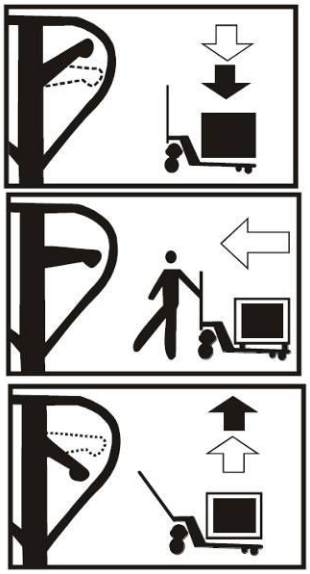
English

5.1.2 Display Unit

⇨ Fasten the display device with both turning knobs (1) on the pallet truck scale and screw-in the load cell cable (2) into the connection of the display device.



5.2 Proper use of the lifting device



⇨ Lower the loading fork

⇨ Move the load

⇨ Lift the loading fork

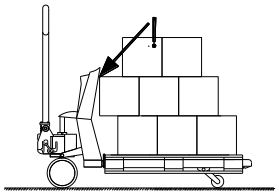
English

5.3 Installation site, location of use of the weighing system

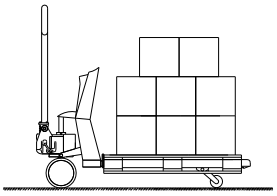
The weighing system is designed to achieve reliable weighing results under normal conditions of use.
You will work accurately and fast, if you select the right location for your weighing system.

Therefore, observe the following for the installation site:

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



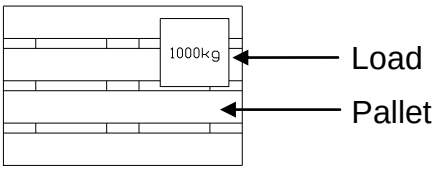
Incorrect lifting of a load



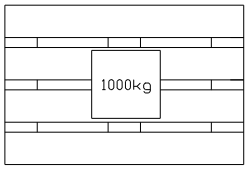
Correct lifting of a load

- The accuracy of the weighing system is falling by approximately 0.1 % per degree if there is a slant of more than 2°. 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.
  In verifiable models off-centre loads, or slants affecting accuracy, activate the inclination switch which in turn disconnects the display.

English

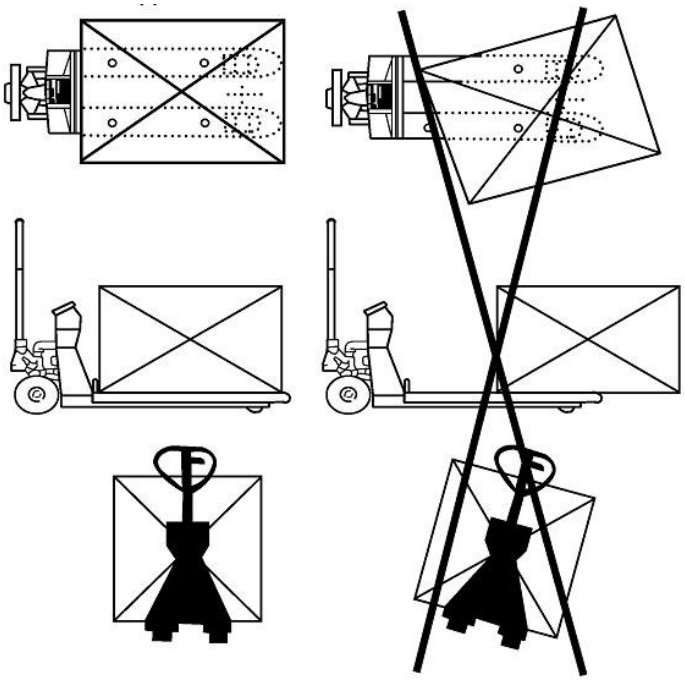


Non-optimal positioning of load



Optimal positioning of load

- Temperature range: The maximum deviation for 0.1% of the weighed load is between -10 and +40°C. Outside this temperature range deviations of up to 0.3% may occur.
- Avoid jarring during weighing
- Protect the weighing system 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.



English

5.4 Scope of delivery

Serial accessories:

- Pallet truck scales
- Battery 7.2V/2000 mAh
- Mains adapter
- Hexagon screw driver
- Operating manual

5.5 Mains connection

Power is supplied via the external mains adapter. The stated voltage value must be the same as the local voltage. Only use original KERN mains adapters. Using other makes requires consent by KERN.

5.6 Rechargeable battery operation

Before the first use, the battery should be charged by connecting it to the mains power supply for at least 12 hours.
The appearance of the rechargeable battery symbol in the weight display indicates that the battery is almost exhausted. The unit will be ready for operation for approx. another 10 hours before switching off automatically. Charge the battery with the help of the supplied power pack. During the loading process the rechargeable battery symbol is displayed flashing.
The rechargeable battery symbol shows the charge status of the rechargeable battery:


Voltage has dropped below prescribed minimum.


Rechargeable battery very low.


Rechargeable battery is completely charged (rechargeable battery symbol flashes while loading)

5.7 Commissioning

Prior to starting-up the weighing system, load the rechargeable battery completely.

To activate the weighing system, press the ON/OFF key.
The operating temperature for the electronic system and the weighing cells will have been reached after three to five minutes. . Prior to this, deviations of c. 0.3% are possible.

Loads should not be lifted before this zero adjust is complete.

5.8 Appliance overview



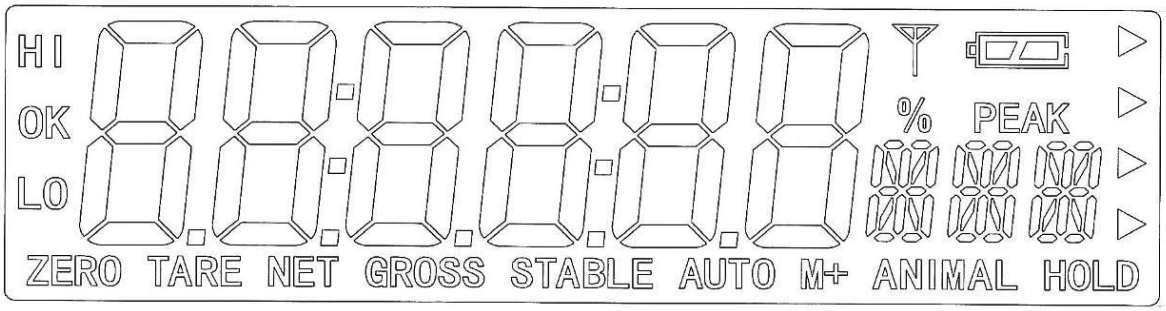


1 Manual lever
2 Drawbar
3 Display Unit
4 Load forks
5 Connection of mains adapter
6 Turning knobs
7 Load cell cables

Manual lever
(Hand lever + Drawbar = Lifting device)

English

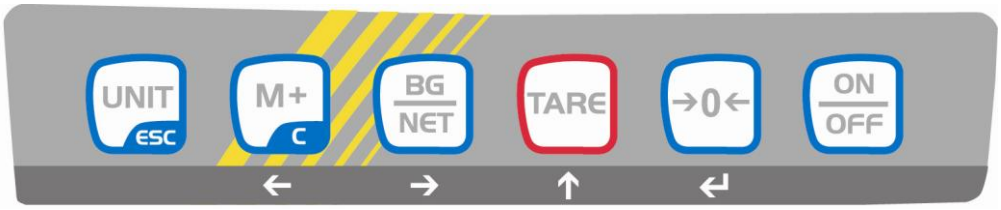
5.9 Overview of display



Display	Significance
	Charging status of rechargeable battery
STABLE	Stability display
ZERO	Zero indicator
GROSS	Gross weight
NET	Net weight
AUTO	Automatic add-up enabled
M+	Totalization
HI **OK** **LO**	Indicators for weighing with tolerance range

English

5.10 Keyboard overview



Key	Function
ON/OFF	• Turn on/off
→0←	• Zeroing
Navigation button ↵	• Confirm entry
TARE	• Taring • Invoke pre-tare-function (press button long time)
Navigation button ↑	• At numeric input increase flashing digit • Scroll forward in menu
M+ C	• Add weighing value to summation memory • Display sum total • Calculate weighing data via interface
C	• Delete
BG NET Navigation button →	• Change between gross ⇔ and net weight • Digit selection to the right
UNIT ESC	• Switch-over weighing unit
ESC	• Back to menu/weighing mode

English

Actuation of a button is only accepted, when the load is stable (and the stability display „**STABLE**“ is illuminated). The display unit only carries out functions as long as the load is stable.

5.10.1 Numerical input via the navigation buttons

Key	Navigation keys	Function
	**Arrow key ↑**	Increase flashing digit
	**Arrow key ←**	Digit selection to the left Delete
	**Arrow key →**	Digit selection to the right
	Arrow key ↵	Terminate input

English

6 Linearization

Linearity shows the greatest deviation of a weight display on the scale to the value of the respective test weight according to plus and minus over the entire weighing range.
If linearity deviation is discovered during a testing instrument control, you can improve this by means of linearization.

- Carrying out linearization is restricted to specialist staff possessing well acquainted with the workings of weighing scales.
- The test weights to be used must be adapted to the weighing scale's specifications; see chapter 2.4 "Testing instruments control".
- Observe stable environmental conditions. Stabilisation requires a certain warm-up time.
- After successful linearization you will have to carry out an adjustment.

English

Call up menu

⇨ Press UNIT esc and M+ C at the same time in weighing mode.
The first menu block FO H-L is displayed.

⇨ Press TARE repeatedly until ProG is displayed.

⇨ Press →0←, password query Pin will appear.

⇨ Press subsequently BG NET, UNIT esc, →0← until the first menu item P1 rEF is shown.

⇨ Press TARE, P2 CAL will be shown.

⇨ Confirm by →0←, SiGrA will be displayed.

⇨ Confirm by →0←, dECi will be displayed.

⇨ Press TARE repeatedly until CAL is displayed.

⇨ Confirm with →0←, select desired setting by TARE

nonLin = adjustment see chap. 7

LinEAr = linearization, see chap. 6

English

How to carry out linearization:



⇩

⇨ Call up menu item LinEAr



⇨ Acknowledge with →0←.
Ensure that there are no objects on the weighing plate.

⇨ Wait for stability display, then press →0←. When “LoAd 1“ is displayed, put the first adjustment weight (1/3 max) carefully in the centre of the weighing platform.



⇨ Wait for stability display, then press →0←. . When “LoAd 2“ is displayed, put the second adjustment weight (2/3 max) carefully in the centre of the weighing platform.



⇨ Wait for stability display, then press →0←. When “LoAd 3“ is displayed, put the third adjustment weight (1/3 max) carefully in the centre of the weighing platform.



⇨ Wait for stability display, then press →0←.



⇨ After the adjustment the balance will carry out a self-test. Err 4 will appear briefly, followed by weighing value. The system is now in weighing mode.



⇨ Remove weight, „0“ is displayed.

An adjusting error or incorrect adjusting weight will be indicated by the error message; repeat adjustment procedure.

After the linearization the weighing system should be adjusted as follows:

English

7 Adjustment

As the acceleration value due to gravity is not the same at every location on earth, each balance must be coordinated - in compliance with the underlying physical weighing principle - to the existing acceleration due to gravity at its place of location (only if the balance has not already been adjusted to the location in the factory). This adjustment process must be carried out for the first commissioning, after each change of location as well as in case of fluctuating environment temperature. To receive accurate measuring values it is also recommended to adjust the balance periodically in weighing operation.

Observe stable environmental conditions. A warming up time (see chapter 1) is required for stabilization. Ensure that the system is not loaded. The system should be lifted by approximately 2 lifting index markings and stand absolutely free.

7.1 Zero-setting

⇨ Unload the weighing system and switch-on by 

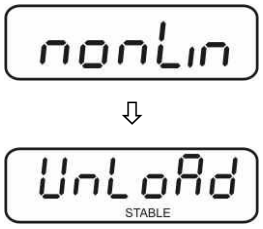
.

⇨ If the weighing system does not display „**0**“, press 

English

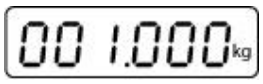
Invoke menu item nonLin, see chapter 9.1 “How to invoke a menu“.

How to carry out adjustments



⇨ Acknowledge with →0←.
Ensure that there are no objects on the weighing plate.

⇨ Wait for stability display, then press →0←. The currently set adjustment weight will be displayed.



(example)

⇨ To change by using the navigation buttons (see chap. 5.10.1) select the desired setting, the active digit is flashing.



⇨ Acknowledge by →0←.

⇨ Carefully place adjusting weight in the centre of the weighing plate. Wait for stability display, then press →0←.



⇨ After the adjustment the balance will carry out a self-test. Err 4 will appear briefly, followed by weighing value. The system is now in weighing mode.

⇨ Remove weight, „0“ is displayed.



An adjusting error or incorrect adjusting weight will be indicated by the error message; repeat adjustment procedure.

English

8 Functions of display unit

8.1 Prior to weighing

8.1.1 Zero-point check

Prior to each weighing process ensure that the system is unloaded and clear of obstructions. The display device must show „**0**“, should this not be the case, press the 

button.

8.1.2 Net weighing: Taring by button

The display unit offers an option that allows tare weights to be reset to zero by pressing a button. In this way net weight changes can be traced. After taring, the display unit will once again start at the smallest display step.

⇨ Lifting a load, e.g. a pallet. The weight value of the pallet is displayed.

⇨ Press button 

The weight value is stored as tare value.
The display unit goes to zero.
The lit up display “**NET**“, indicates that a tare weight is active.

⇨ Place the sample, only the weight of the sample is displayed.

⇨ Withdraw sample for other weighing and proceed with the new samples as described before.

⇨ Press 

to switch over between gross and net weight

When the pallet is removed, the display shows the weight of the pallet as a negative value.

⇨ Press the button 

anew, the system changes to the zero display.

English

Note:

- When the balance is unloaded the saved taring value is displayed with negative sign.

- To delete the stored tare, unload the weighing plate and press the TARE button, the zero display appears.

- The taring process can be repeated any number of times. The limit is reached when the whole weighing range is exhausted.

8.2 Numerical tare input (PRETARE)

The system has the possibility to enter the tare weight.
A tare weight which is bigger than the maximum of the weighing system, will not be accepted.

8.2.1 Enter tare weight

Enter the pretare value or invoke the stored pretare value:

⇨ In weighing mode press the TARE button for approx.3 sec., the tare value saved as last will be displayed, the left digit flashes.

⇨ Press the navigation buttons (see chap. 5.10.1) to enter the desired value, the active digit is flashing.

⇨ Acknowledge with →0←. The entered value is displayed as negative pretare value.

⇨ Lift-off load, the net weight is displayed, moreover „NET“ will appear

8.2.2 Delete pretare value

When entering the pretare value, set all decimal digits to „0“.

English

8.3 Weighing

⇨ Press downwards the hand lever of the lifting device, the weighing system is lowered.

⇨ Switch-on by 

, after a concluded self-test the system changes to zero display „**0**“

⇨ If „**0**“ is not displayed, press 

⇨ Place the loading fork under the pallet in a way that the pallet is in the center of the loading fork.

⇨ Move upwards the loading fork with help of the lifting device until the load has completely detached from the floor
If the stability display „**STABLE**“ lights up, the gross weight will be displayed.

8.3.1 Gross weighing

After the load was lifted, e.g. on a pallet, the display shows the gross value of the weighed weight.

8.3.2 Net weighing

This function may only be carried out, after the system having been tared. “**NET**“ will be displayed

Use the button 

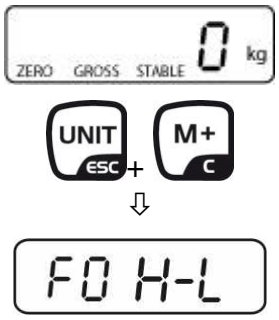
to switch over between the display of the net weight and the display of the gross weight.

English

8.4 Weighing units switch-over

Press the UNIT ESC button to set the different weighing units.
These must be activated before in the menu (chap. 9.2).

How to enable weighing units:



⇨ Press TARE until F2 Unt is displayed

⇨ Press →0←, Ut on or Ut oFF is displayed with the respective weighing unit.

⇨ Use TARE to change between Ut on and Ut oFF , thus activating [on] / deactivating [off] the displayed weighing unit.

⇨ Use →0← to save the selected setting

⇨ Repeat sequence for each desired weighing unit.

⇨ Press UNIT ESC repeatedly and the device will return to weighing mode.

How to change weighing units:

⇨ To return to the previously enabled weighing units go to weighing mode by UNIT ESC

English

8.5 Weighing with tolerance range

You can set an upper or lower limit when weighing with tolerance range and thus ensure that the weighed load remains exactly within the set limits.
During tolerance controls such as dispensing, portioning or sorting the unit will indicate whether a value exceeds or falls short of limits with an optical [ok] as well as an audio signal according to the setting in the menu block "F3 oFF"; see chapter 9.2.

Selectable mode	Description
bP 1	Acoustic signal turned off
bP 2	If load is within tolerance range, [ok] will be displayed and audio signal will be sounded.
bP 3	If the load is beyond the tolerance range [ok] will be shown and the audio signal will sound.

1. Call up menu

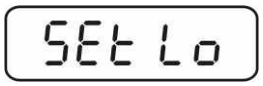


⇩

⇨ In weighing mode press UNIT/ESC und M+/C at the same time and the first menu block F0 H-L will appear.



2. Set limit values



⇨ Keep on pressing →0← until the display used for entering the lower limit **SET LO** appears.

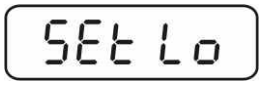


⇨ Press →0←, the current setting will be displayed.

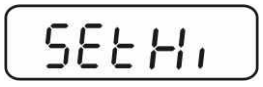


(example)

⇨ Press the navigation buttons (see chap. 5.10.1) to enter the lower limit value, the active digit is flashing.



⇨ Confirm input by →0←.



⇨ Select **SET HI** by pressing TARE.

English

⇨ Press →0←, the current setting for the upper limit will be displayed.

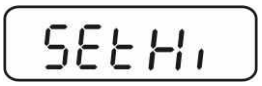


⇨ Press the navigation buttons (see chap. 5.10.1) to enter the upper limit value, the active digit is flashing.



(example)

⇨ Confirm input by →0←.



⇨ Press UNIT esc, the unit will return to the menu

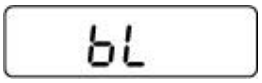


3. How to set tolerance weighing mode



⇨ Press TARE repeatedly until F3 oFF is displayed.

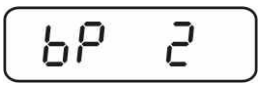
⇨ Confirm by →0←, bL will be displayed.



⇨ Select **BEEP** by pressing TARE



⇨ Press →0←, the current setting will be displayed.



⇨ Select desired setting (bp 1, bp 2, bp 3) with TARE and confirm by pressing →0←.



⇨ Press UNIT esc repeatedly; weighing system is in tolerance weighing mode. From here evaluation takes place whether the goods to be weighed are within the two tolerance limits.



English

4. Weighing with tolerance range

⇨ Tare when using a weighing container.

⇨ Put on goods to be weighed, tolerance control is started.

Load below specified tolerance	Load within specified tolerance	Load exceeds specified tolerance
		
(example)	(example)	(example)

- The tolerance control is not active when the weight is under 20d.
- To delete limits, enter “00000 kg“.

8.6 Manual totalizing

With this function the individual weighing values are totalized into the sum memory by pressing M+ C.

	▪ No load may be on the loading fork ▪ The system should be stable (stability display „**STABLE**“ illuminated) ▪ The added-up weighing value must be more than 20d.

	• Menu settings: „**F4 Prt**“ ⇨ „**P Prt**“

English

⇨ Loading the system with the load to be added

⇨ Wait for stability display „**STABLE**“, then press 

, the weight value will be added into a sum memory

⇨ „**ACC 1**“ is displayed for approx. 2 sec., after that the system returns into the standard weighing mode. Next to the weight display „**M+“** appears

⇨ Unload the system, the display returns to „**0**“

⇨ Charge with the second load, wait for the stability display „**STABLE**“

⇨ Press 

anew, the weight value will also be saved

⇨ „**ACC 2**“ will be displayed, the total weight will be displayed for approx. 2 sec. before the system changes into the weighing mode.

⇨ Carry out further weighings in the same way. Ensure that the system is unloaded between the weighing procedures.

⇨ You can repeat this process until the capacity of the weighing system is exhausted.

Display of the saved weighing data:

⇨ The system must be in zero display („**ZERO**“-is displayed)

⇨ Press 

, number of weighing, followed by the total weight will be displayed for 2 sec.

Delete weighing data:

⇨ When zero is displayed press 

, the number of weighings followed by the total weight will be displayed for 2 sec. During this display press 

again. The data in the summation memory are deleted. The „**M+**“ in the display disappears.



English

8.7 Automatic adding-up

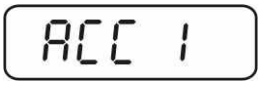
This function is used to issue and add individual weighing values automatically to the summation memory on unloading of weighing scale without pressing M+ C.

i	• Menu settings: F4 Prt ⇨ „P AUto“ • The indicator „**AUTO“** will appear. 

Add up:

⇨ Charge the system with the load which shall be added
After a successful standstill control you will hear an audio sound.

⇨ Unload the weighing good, the weighing value is added into the summation memory. „**ACC 1**“ will be displayed shortly, then the balance changes into the weighing mode



than the balance changes into the weighing mode. „**M+**“ will be displayed.
More weighed goods can only be added when the display ≤ zero.



⇨ Charge with the second load.
After the standstill control sounds a signal tone. Unload the weighing good, the weighing value is added into the summation memory. Number of weighing, followed by the total weight will be displayed for 2 sec.



⇩



(example)



⇨ Add more weighed goods as described before.
Please note that the weighing system must be unloaded between the individual weighing procedures.

English

⇨ You can repeat this process until the capacity of the weighing system is exhausted.

i	• Display and delete weighing data see chap. 8.6

8.8 Animal weighing

The mean value function is suitable for weighing restless loads.

i	Menu setting: P4 CHt ⇨ nodE 2 The indicator **ANIMAL** will be displayed. 

⇨ Move load onto weighing system.

⇨ When the load has somewhat calmed down, you will hear an audio sound. The mean value achieved will be shown.

⇨ Whilst averaging is taking place you can add or remove loads as the measuring value will be constantly updated.

To deactivate the animal weighing function / return into the weighing mode

select menu setting P4 CHt ⇨ nodE 2 .

English

8.9 Peak value function

This function displays the highest load value (peak value) of a weighing.
The peak value remains in the display until it will be deleted.

i	Menu setting: P4 CHt⇨nodE 4

⇨ In weighing mode press TARE and →0← at the same time, in the display appears „**HOLD**“



⇨ To exit the peak value function, press, TARE and →0← anew

English

9 Menu

In the menu the settings of the weighing system can be modified and functions can be activated. With that the weighing system may be adapted to individual weighing requirements.
Four menu items can be selected to change settings. Moreover there is an other menu item for adjustment.

9.1 Navigation in the menu

Call up menu	⇨ In weighing mode press UNIT esc und M+ C at the same time and the first menu block F0 H-L will appear.
Select menu block	⇨ With help of TARE , the individual menu blocks can be selected one after the other.
Select setting	⇨ Confirm selected menu item by pressing →0←. The current setting will be displayed.
Change settings	⇨ To change to the available settings, press the navigations keys as described in chap. 5.10.1.
Acknowledge setting / exit the menu	⇨ Either save by pressing →0← or cancel by pressing UNIT esc.
Return to weighing mode	⇨ Press UNIT esc repeatedly to exit menu.

English

9.2 Menu overview

Menu block	Menu item	Available settings / explanation	
F0 H-L Weighing with tolerance range, see chap. 8.5	SET Lo	Upper limit value, input (factory setting 000.000)	
	SET Hi	Lower limit value, input (factory setting 000.000)	
F1 toL	to Clr	Not documented	
	to P-C		
	to Prt		
F2 Unt Weighing units see chap. 8.4		g→lb→oz→tJ→ hJ Factory setting „kg“	
F3 oFF	bl	EL on	Background lighting of display is switched on permanently
		EL AU	Display background illumination off
		EL off	Automatic background illumination on when weighing pate is loaded or key pressed.
	bEEP see chap. 8.5	bp 1	Audio signal switched off during tolerance weighing
		bp 2	If load is within tolerance, [ok] will be displayed and audio signal will be sounded
		bp 3	If the load is beyond the tolerance range, [ok] will be shown and the audio signal will sound.
	SetoF	oF 0	Automatic switch-off function switched off
		oF 3	Automatic switch-off after 3 minutes
		oF 5	Automatic switch-off after 5 minutes
		oF 15	Automatic switch-off after 15 minutes
		oF 30	Automatic switch-off after 30 minutes

English

F4 Prt	Select desired setting with TARE and acknowledge by →0←.	
	PPrt	**Manual totalizing:** After pressing M+ C the weighing value will be added into the summation memory.
	PCont SEriE ASI PCnt2 PStAb	not documented
	P AUto	**Automatic adding-up:** This function is used to add the individual weighing values automatically to the summation memory on unloading of weighing scale.
ProG	Pin	Enter password: press BG NET, UNIT ESC and →0← successively

Menu block Main menu	**Menu item Submenu**	**Available settings / explanation**
P1 rEF	A2n 0	not documented
	0-AUto	Zero setting range Load range where the display after switching-on the balance is set to zero. Selectable 0 %, 2 %, 5 %, 10 %, 20 %, 50%
	0-rAnG	Zero setting range Load range where the display is set to zero by pressing →0←. Selectable 2 %, 4 %, 10 %, 20 %, 50%, 100 %.
	SPEEd	Not documented

English

P2 CAL	SiGrA	dECi	Position decimal point available selection 0, 0.0, 0.00, 0.000, 0.0000
		inC	Readability: Selectable 1, 2, 5, 10, 20, 50
		CAP	Balance capacity (max)
		CAL	LinEAr Linearization
			nonLin Adjustment
	dUArA		not documented
	dUAin		not documented
P3 Pro	tri		Not documented
	CoUnt		Internal A/D converter value
	rESEt		Reset to default setting
	GrA		Not documented
P4 CHt	nodE 1		Weighing mode (tolerance weighing, add-up)
	nodE 2		Animal weighing mode
	nodE 3		Not documented
	nodE 4		Peak value function

English

10 Servicing, maintenance, disposal

10.1 Clean

Please do not use aggressive cleaning agents (solvents or similar agents), but a cloth dampened with mild soap suds. Ensure that no liquid penetrates into the device and wipe with a dry soft cloth.

10.2 Servicing, maintenance

The same maintenance guidelines apply to the chassis of the mobile weighing system as those for simple manual pallet trucks. Experience has taught us that the integrated weighing system continues to function even if the chassis was damaged by overloading.

General rules:

- As the steering wheels are mounted at the front, it is better to pull rather than push the pallet truck scale.
- If the lifting device is not used, the manual lever should be left in centre position. This prolongs the life span of the seals.
- 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 (with the exception of polyurethane) as well as the joints in the load roller section should be regularly cleaned and greased.

10.3 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.

11 Error messages

Error message	Possible cause	Remedy
-----	• Weighing range exceeded	• To unload the weighing system
Err 4	• System out of zero range during switching-on or by pressing the →0← button	• Unload weighing system and tare again using TARE.
Err 6	• Internal A/D value outside the normal range	• To unload the weighing system • Check connectors

If the error message appears repeatedly, please contact your retailer.

English

12 Instant help

In case of an error in the program process, briefly turn off the weighing system 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.	• Weighing system is not switched on. • Rechargeable battery empty
The displayed weight is permanently changing	• Draught/air movement
-	• Sites with vibration. • Loading 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)

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

English