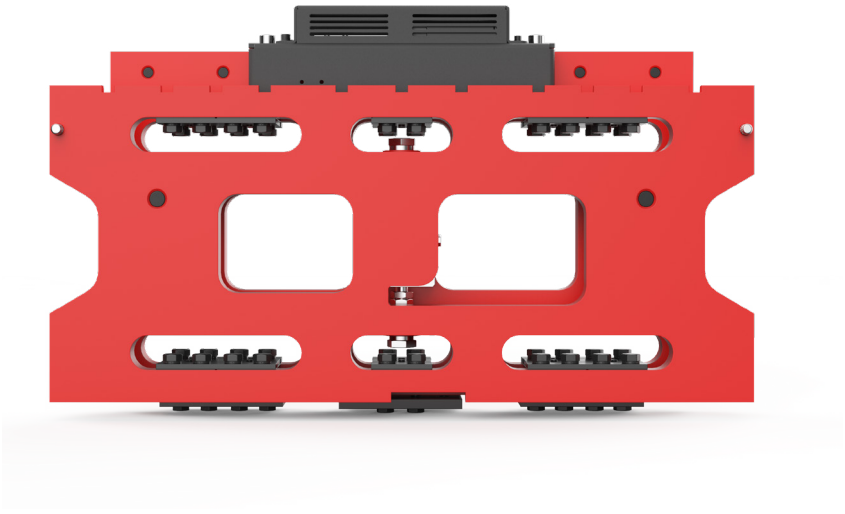
USER MANUAL
RAVAS iCP RedBox

Intelligent Carriage Plate with RAVAS RedBox technology



We would like to inform you about the fact that this RAVAS product is 100% recyclable, provided that parts are being processed and disposed of in the right manner.
More information can be found on our website: www.ravas.com

Rev. 20250114

PLEASE RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE
If you have any queries concerning the duration and terms of the RAVAS warranty, please contact your supplier or check our General Sales and Service Conditions, which are available on request.

The manufacturer accepts no liability for any damage or injury caused by failure to follow these instructions, or from negligent operation or assembly, even if this is not expressly stated in this instruction manual.
In light of our policy of continuous improvement, it is possible that details of the product may differ from those described in this manual. For this reason, these instructions should only be considered as guidelines for the installation of the relevant product. This manual has been compiled with all due care, but the manufacturer cannot be held responsible for any consequences of errors.

Table of Contents

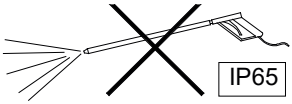
1. Introduction

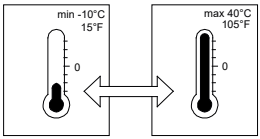
This manual describes the installation and use of the **RAVAS iCP RedBox**. Read this manual carefully. The installer must be informed of the contents of this manual. Always do things in the correct order. This manual should be kept on a safe and dry place. In case of damage or loss the user may request a new copy of the manual from RAVAS.

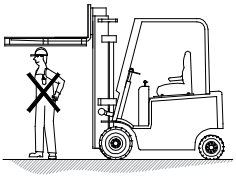
2. Warning & Safety measures

When using the **RAVAS iCP RedBox**, please observe the instructions and guidelines contained in this manual carefully. Always perform each step in the rigth sequence. If any of the instructions is not clear, please contact RAVAS.

- All safety regulations that apply to the truck remain valid and unchanged;
- No weighing operations are allowed if any person or object is in the vicinity; around, under or close to the load;
- Any modifications done to the system must be approved in writing by the supplier, prior to any work being completed;
- It is the sole responsibility of the purchaser to train their own employees in the proper use and maintenance of this equipment;
- Do not operate this unit unless you have been fully trained in its capabilities;
- Check the accuracy of the scale on a regular basis to prevent faulty readings;
- Only trained and authorized personnel are allowed to service the scale;
- Always follow the operating, maintenance and repair instructions of this truck and ask the supplier when in doubt;
- RAVAS is not responsible for errors that occur due to incorrect weightings or inaccurate scales.







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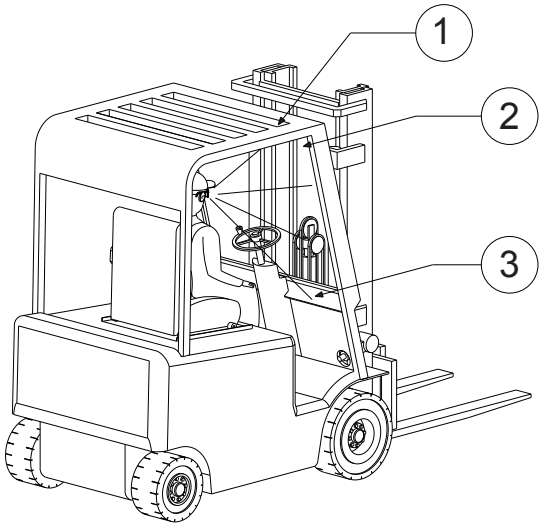
3. System setup

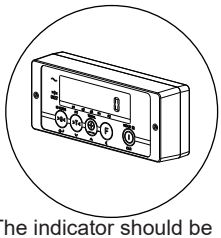
The **RAVAS iCP RedBox** is a fully automatic weighing system, The system is powered by the forklift truck and depending on the installation of the system to truck power it is either always on or on when forklift truck contact is switched on. After power on keep forks level and zero the system by pressing the zero button as described in chapter “4.4.1 Key functions”.

3.1 Installing the indicator

Find a suitable position for the indicator:

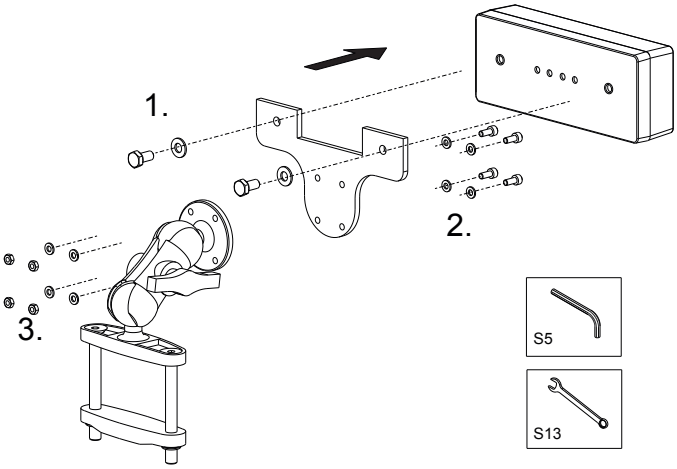
1. at the cabin’s roof.
2. on the right side of the cabin, mounted onto a side-rail.
3. on the dashboard.



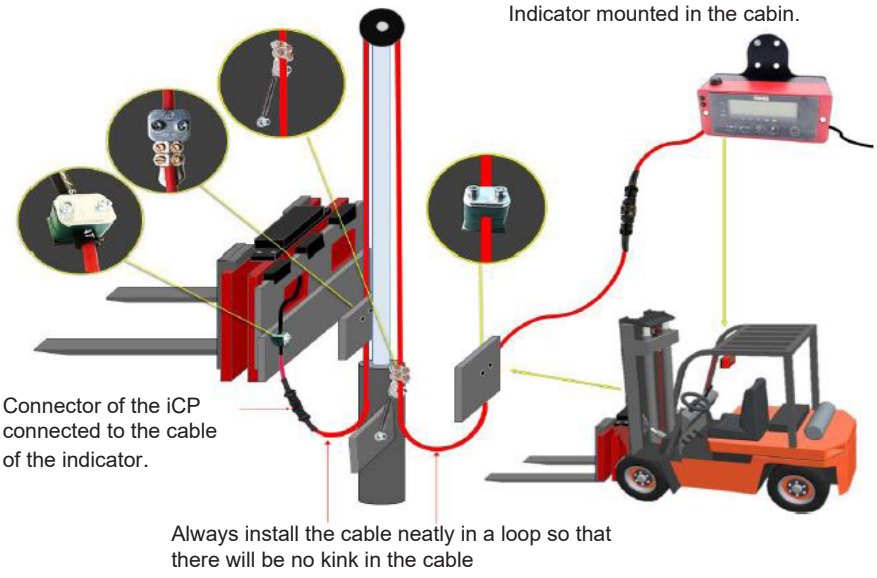


The indicator should be easy to reach and read!

Installation of the indicator bracket and support.



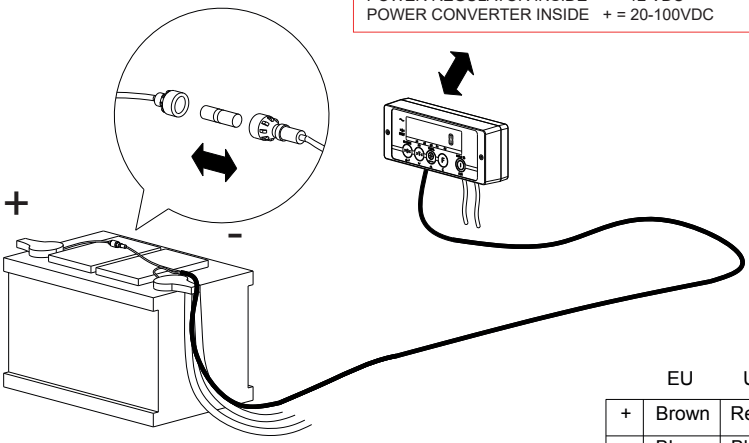
3.2 Mast cabling (example)



3.3 Indicator power supply from forklift truck battery

Only possible if indicator is equipped with an integrated voltage converter or voltage stabilizer.

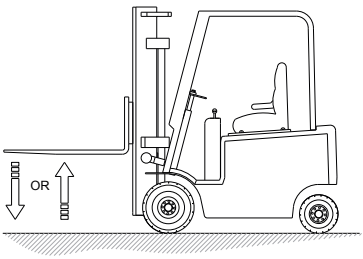
READ LABEL ON BACK FOR POWER SUPPLY INDICATOR
POWER REGULATOR INSIDE + = 12 VDC
POWER CONVERTER INSIDE + = 20-100VDC



	EU	US
+	Brown	Red
_	Blue	Black

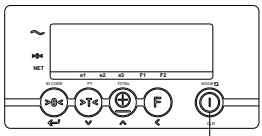
3.4 Connecting and switching on the RAVAS iCP

1



Switch on the iCP:
Move the iCP quickly in upwards or downwards direction.

2

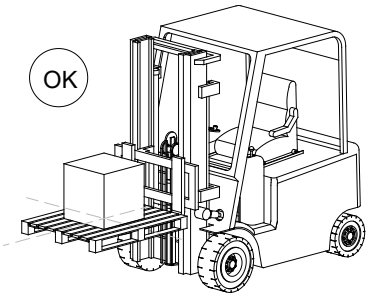


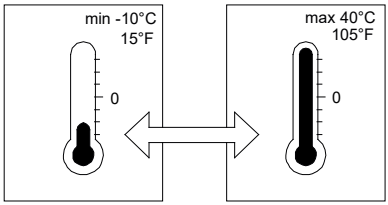
Start up the indicator. Press the on/off key.

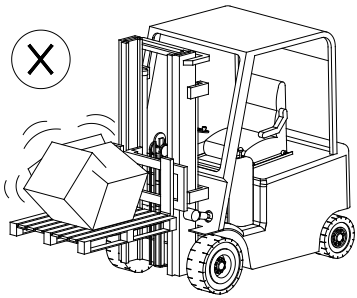
After 5 seconds all electronics are warmed up and you can start weighing.

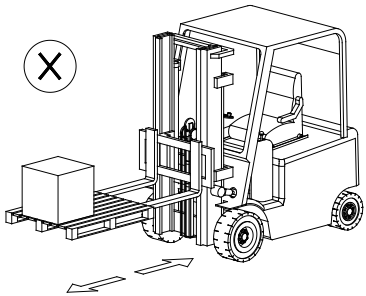
4. Use

4.1 Use (accurate weighing)





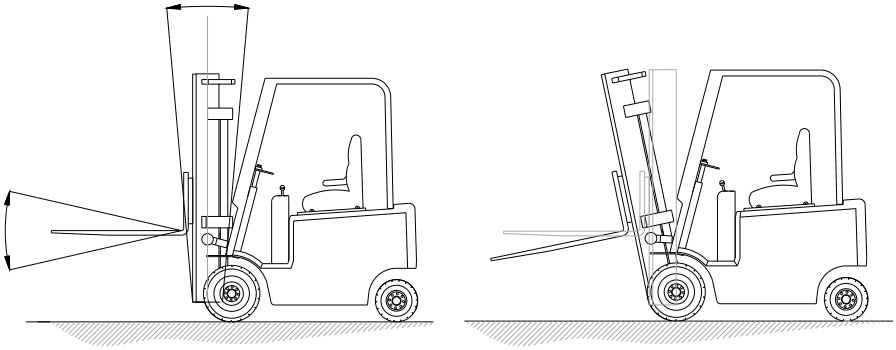




4.2 Static semi-automatic weighing

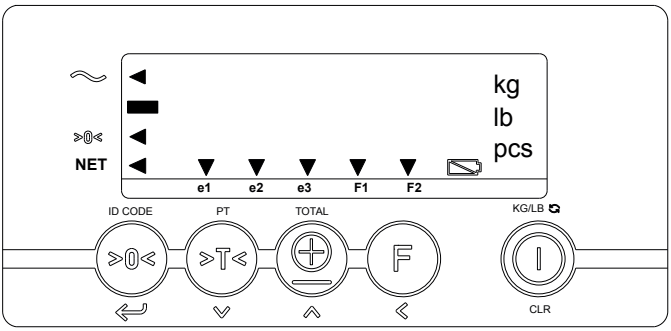
The operator will decide which weighing will be saved by performing a save operation when the scale is stable and remains in place.

4.3 Level correction



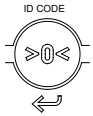
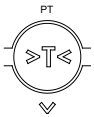
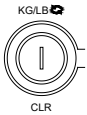
During weighing the fork angle has to remain in between -3 and +3 degrees to compensate for the fork angle. If the fork angle exceeds past the 3 degrees deviation, the system will stop calculating the weight and will restart the calculation when the forks are within boundaries again.

4.4 Indicator functions



	◀	the weighing system (including load) is stable
	▬	the weight shown is negative
ZERO	◀	the weight shown is within the zero range
NET	◀	the display is showing the net weight
e1	▼	displayed weight is in range 1 (option multi range)
e2	▼	displayed weight is in range 2 (option multi range)
e3	▼	displayed weight is in range 3 (option multi range)
stp/F1	▼	setpoint 1 active (option function key activated)
stp/F2	▼	setpoint 2 active (option function key activated)
kg		displayed weight is in kilograms
lb		displayed weight is in pounds
		low bat indicator

4.4.1 Key functions

Standard function (short key press)	Key	Special function (long key press)	Value entering function (entry mode)
Zero setting		no function	enter
no function		no function	decrease the value of the digit flashing
no function		no function	increase the value of the digit flashing
no function		open user menu	shift to the next digit on the left
no function		no function	clear entry or return to previous page

4.4.2 Backlight functions

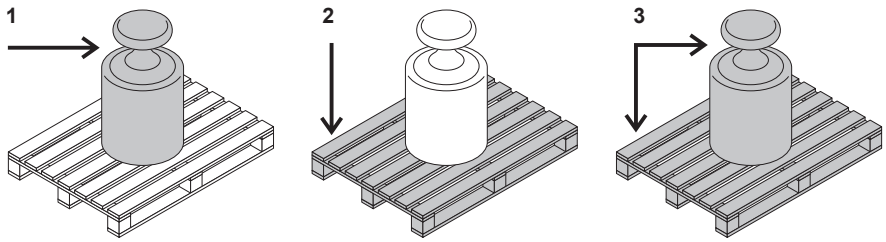
Colour	Meaning
No backlight colour	Weight is zero, ready for next weighing
Dimmed green, blinking	Weight is being determined
Bright green, constant	Weight is determined
Dimmed red, constant	Warning. For example: WiFi connection lost
Red, constant	Error. For example: Action not permitted or underload
Red, blinking	Critical error. For example: overload

4.5 Error messages

Display	Meaning	Out of error mode
Err01	Load cell signal is unstable	Automatic
Err02	Overload on full scale	Automatic after removing weight
Err03	Gross negative. This action is not allowed	Automatic
Err04	Out of zero range	Press any key
Err39	Communication error with level sensor	Automatic
Er210	Date and time not configured	Contact RAVAS Service department
Er211	Too many digits for the display	Contact RAVAS Service department
Er213	Alibi checksum not correct	Contact RAVAS Service department
Er215	Weigh-in-Motion calculation not completed	Automatic
----	Underload	Lift up the forks from the ground
Err_L	Weighing system is out of level (only legal-for-trade version)	Put the weighing system into horizontal position
	Battery of indicator is empty	Charge the battery pack
OimL	Action not allowed (only legal for trade version)	Automatic
ntEP	Action not allowed (only legal for trade version)	Automatic
|_ _|LL	Audit trail no out of range	Contact RAVAS Service department
	Spinning: No connection with RedBox	Check connection to RedBox
tiP	Too large load on tip of forks	Automatic after removing weight
Side	Too large load on one fork	Automatic after removing weight
--0--	Scale needs to be zeroed	Zero the scale

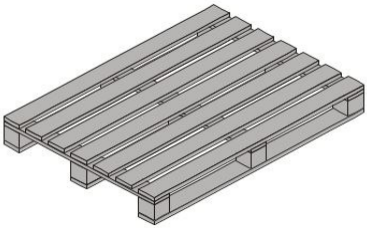
4.6 Net / Tare / Gross weight

EXPLANATION: Net(1) + Tare(2) = Gross(3)



4.6.1 Net weighing: automatic tare

1



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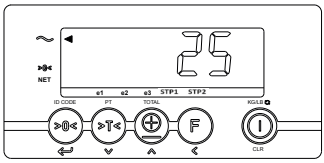

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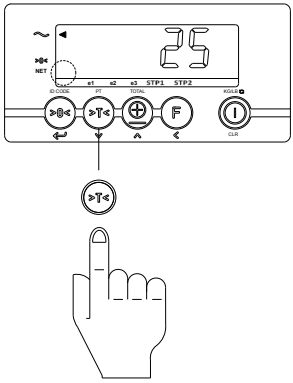

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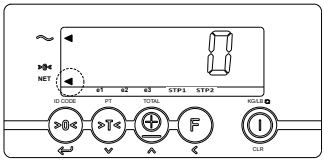
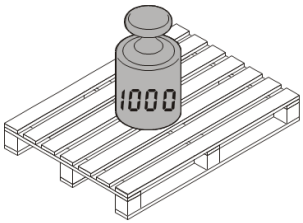


The indicator is set to zero.
The "NET" pointer shows that the tare weight is activated.

5



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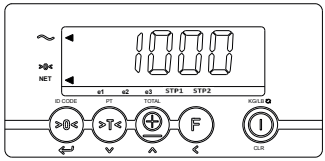
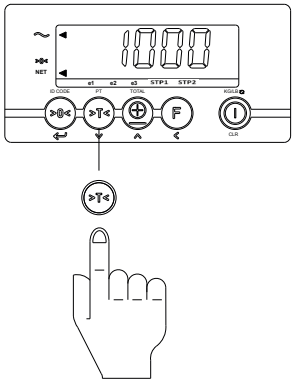


The display shows the net value of the weighed load.

7



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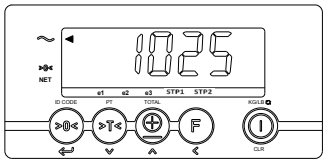
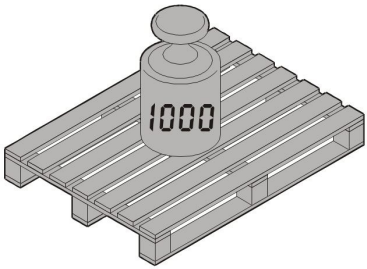


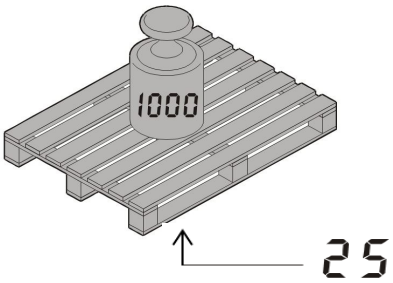
The gross weight is displayed again.

9



4.6.2 Net weighing: manual tare (PT)

1



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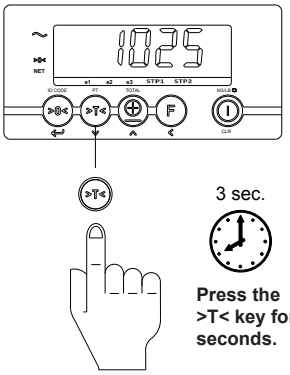
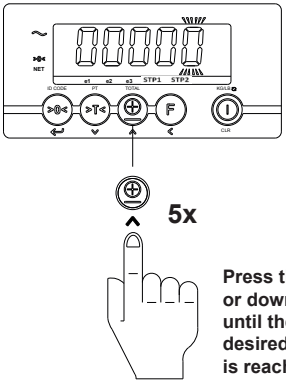


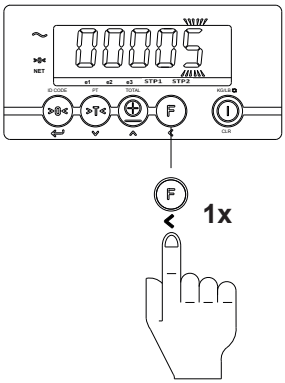
Press the >T< key for 3 seconds.

3



Press the up or down key until the desired value is reached.

4



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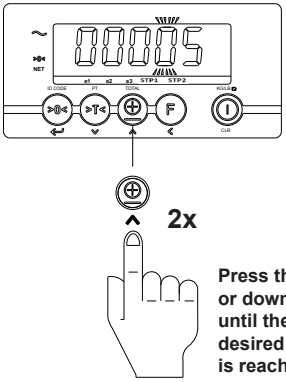
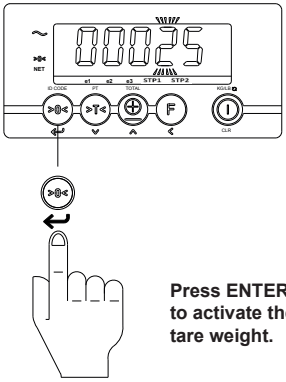


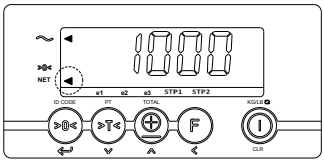
Press the up or down key until the desired value is reached.

6



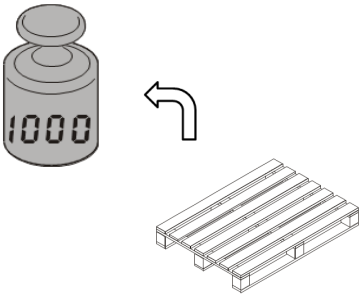
Press ENTER to activate the tare weight.

7



The "NET"pointer lights up.

8



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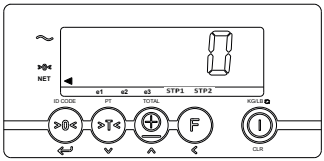

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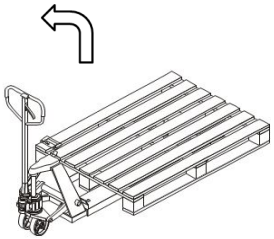

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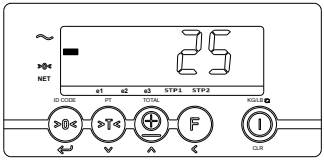
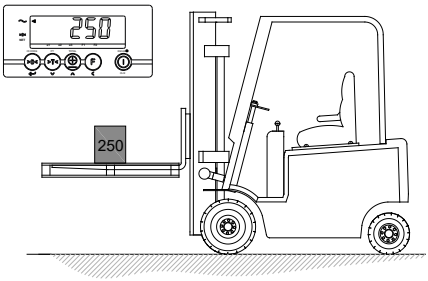


When the pallet wagen is completely unloaded, the tare value is displayed negatively.

12

4.7 Adding & reset

1



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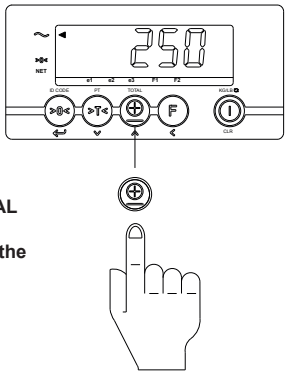
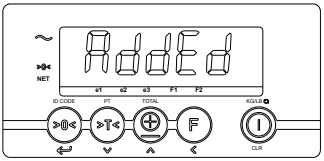


Press the TOTAL key to add the weight load to the total weight.

3



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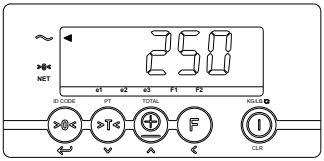
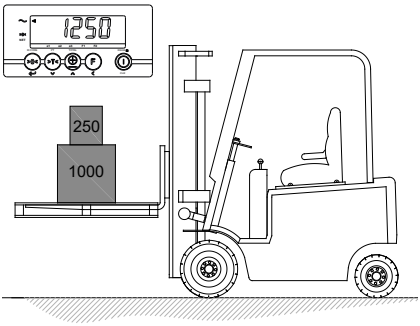


The display returns to the weighing mode automatically.

5



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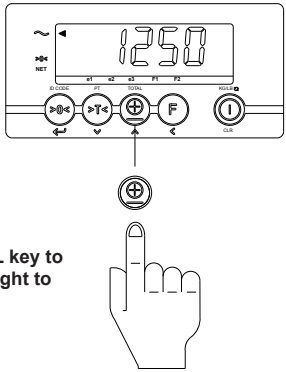
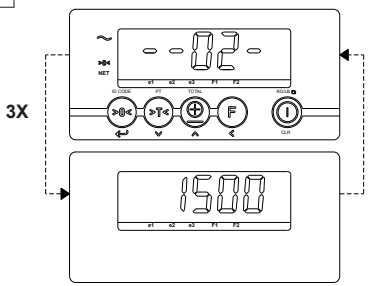
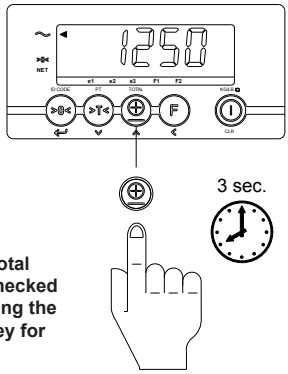


Press the TOTAL key to add the load weight to the total weight.

7

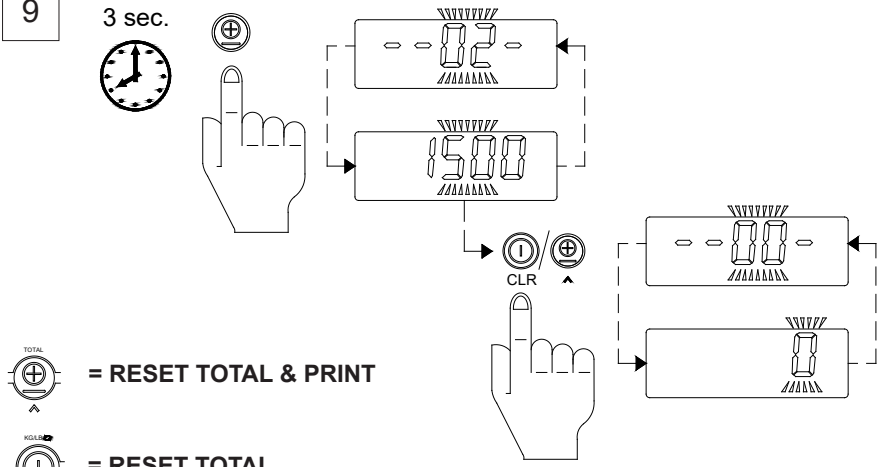


8



The subtotal can be checked by pressing the TOTAL key for 3 sec.

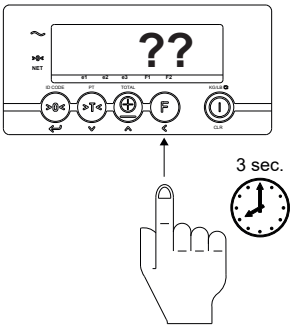
9



= RESET TOTAL & PRINT

= RESET TOTAL

4.8 User settings



The user menu can be entered by pressing the F-key (function) for 3 sec.

To scroll through the settings in the user settings menu, use the UP and DOWN keys. Select the user settings you desire to change by pressing the ENTER key.
Press the CLR key to back out of the current setting or the user settings menu.

4.8.1 BLtOn

This setting will activate the wireless connection. After 15 minutes without an active wireless connection it will be turned off. This function is currently disabled (default is always on).

4.8.2 UID

Read out the unique WiFi or other wireless address. This address can then be used to connect to the RAVAS RedBox for system servicing capabilities. Press the function key in this menu to see the last digit of the UID.

4.8.3 Alibi

Read out the alibi memory (only for OIML or NTEP systems) by entering the alibi no.

4.8.4 CrC

The system CRC16 checksum calculated over the legally relevant parameters and calibration.

4.8.5 SEAL0/1

The current legal-for-trade sealing state can be checked where SEAL0 means the system is not sealed and SEAL1 meaning the system is sealed for legal-for-trade.

4.8 User settings - continuation

4.8.6 TAC

The parameter change event counter will be displayed for a legal-for-trade system. This relates only to the legally relevant parameters.

4.8.7 CAL

The calibration change event counter will be displayed for a legal-for-trade system.

4.8.8 Count

The seal counter will display the amount of times the system has been sealed for a legal-for-trade purpose.

4.8.9 Ver

Choosing the Ver option will display the legally relevant software version number of the RAVAS RedBox.

4.9 Alibi Memory

The RedBox has the possibility of an alibi memory. The alibi memory will only be used when the weighing system is set for OIML or NTEP. If the weighing system is set for 'NONE' the alibi memory will remain unused.

The RedBox stores every weighing in its alibi memory and assigns a unique number to it.

The data stored in the alibi memory are:

1. Date > this is the date in format dd\mm\yy (EU) or mm\dd\yy (US).
2. Time > this is the time in format hh:mm.
3. Gross weight > this number always consists of the positive or negative sign, 5 digits, a possible decimal point (as part of the 5 digits) and the unit (kg or lb).
   For example: +0233.5kg or -00136.lb.
4. Net weight > this number always consists of the positive or negative sign, 5 digits, a possible decimal point (as part of the 5 digits), the unit (kg or lb), and whether it was a calculated net or a measured net. For example: +0233.5kgC or -00136.lb_.
   The 'C' stands for calculated and is sent along when a preset tare value was active. If there is no preset tare value active a blank (space) is put behind the kg (or lb).
5. Tare weight > this number always consists of the positive or negative sign, 5 digits, a possible decimal point (as part of the 5 digits), the unit (kg or lb), and whether it was a preset tare or a measured tare. For example: +0233.5kgP or -00136.lb_.
   The 'P' stands for preset tare and is sent along when a preset tare value was active. If there is no preset tare value active a blank (space) is put behind the kg (or lb).
6. Alibi number > this is a 5 digit number which is generated by the RedBox. It will start at '00001' and increase with every weighing up to '99999'. When this number is reached it will start at '00001' again.

The alibi memory is 8Mbyte big. It can contain 99999 weighings. The alibi memory works with FIFO (first in first out). When it reaches '99999' the oldest data will be first overwritten.