OPERATORS MANUAL

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1. THE WEIGHING HAND PALLET TRUCK

1.1. TAKING THE SYSTEM INTO OPERATION

To activate the scale turn it on using the on/off (①) button on the terminal.

After 3 to 5 minutes the electronics and load cells have reached the operational temperature. Before this, inaccuracies of up to ca. 0.3% may occur.

It is recommended not to lift loads before the zero-point correction has been executed.

1.2. USE

The power supply to the system takes place through an exchangeable battery pack. With a completely charged battery pack the total weighing time is about 35 hours (on a system without a printer).

When the voltage level of the battery is running low, the display will show "LO-BA". When the battery is completely empty, the weighing system switches off.
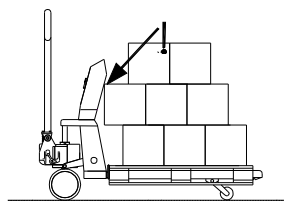
When charging, it is necessary to charge the battery for at least 6 hours. This will prevent loss of battery capacity.
If you use the system in shift work or if the system has a built-in printer, it is recommended to purchase a supplementary battery pack.
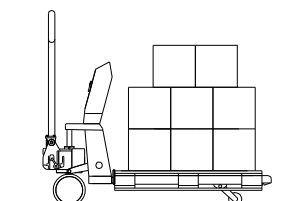
The battery can be charged on the adapter supplied with the charger. When the battery is charging, the LED on the charger is lit. When the LED turns off, the battery is fully charged.
It is not possible to overload the battery because the charger switches off automatically.

The weight must be lifted freely: without touching the housing of the indicator or other pallets:
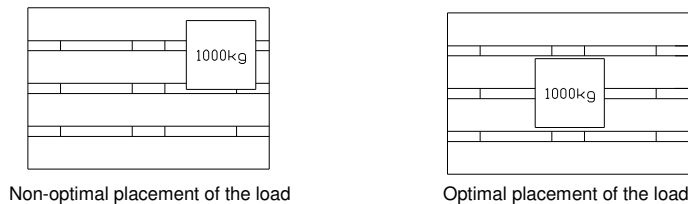
Wrong way of lifting the load   Correct way of lifting the load

The accuracy of the weighing system diminishes with circa 0.1% per degree starting from a tilted position of 2°. This effect also occurs with pits/pot-holes in the floor. An even floor is optimal.

The most accurate weighing result is obtained when the centre of gravity of the load is placed between the forks. With an non-centric loading, the forks will tordate and bend. This may result in a higher inaccuracy. With NTEP versions, the level control will switch off the indicator with a non-centric loading or a tilted position that influences the weighing accuracy.

Non-optimal placement of the load · · · · · · · · · · · · · Optimal placement of the load

Temperature range: between -10 and +40° C. Fast temperature changes must be avoided because it will cause condensation in the electronics. During acclimatisation the weighing system must be switched off.
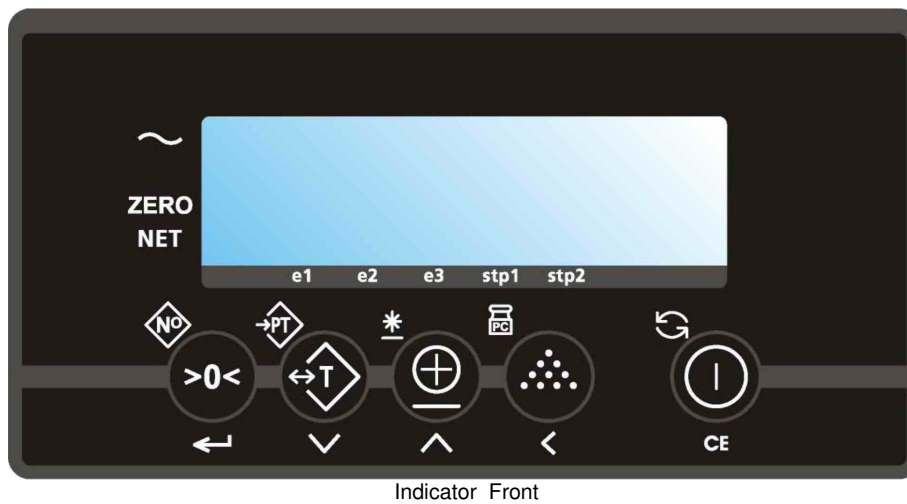
2.3. MAINTAINANCE

The maintenance guidelines for normal pallet trucks apply to the chassis of the mobile scale. From experience we know that the integrated scale still functions when the chassis is damaged by overloading.

Main guidelines:
- Because the steering wheels are mounted in the front, pulling of the pallet truck is preferred above pushing it.
- When the lifting mechanism is not used, the handle should be kept in the neutral, middle, position. This prolongs the life span of the sealings.
- The scale meets up to the protection class IP65. This means that dust or moisture (rain or water beam from all sides), will not influence the operation of the electronics. However, high-pressure cleansing in combination with warm water or chemical cleansers will lead to the entry of moisture and therefore negatively influence the operation of the system.
- Only specialists may undertake any welding. This is to avoid damage to electronics and load cells.
- The bearings of the wheels (non-polyurethane) and the pivoting points of the levelling bar of the loading wheels must be cleansed and greased regularly.

2. TOUCH PANEL INDICATOR

Indicator Front

There are 3 display-modes.
The display may show the weight in lbs or in kgs or it shows the number of pieces.
Also the battery sign is integrated in the display in order to show a low battery status.

THE DISPLAY

By means of eight pointer bars the display shows:

$\sim$ ◀   the scale (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 shown is in range 1

e2   ▼   displayed weight shown is in range 2

e3   ▼   displayed weight shown is in range 3

stp1   ▼   setpoint 1 is activated

stp2   ▼   setpoint 2 is activated

THE TOUCH PANEL

Each key has 2 operational and one entry function

Key	Function level 1 (short key press)	Function level 2 (long key press)	Function level 3 (entry mode)
	zero setting	code entry	enter
	automatic tare	pre-set tare	decrease the value of the digit flashing
	print weight and add to the total	check subtotal and print total	increase the value of the digit flashing
	sampling a piece weight	enter a piece weight	shift to the next digit on the left
	on/off switch	change units mode	clear entry

IMPORTANT

Operation of a key is not accepted unless the scale is stable (and the "load stable" pointer lights up). This means that the indicator only executes commands with a stable load.

WARNING

When the weighed load surpasses the pre-set maximum, the display shows: "ERR02". In order to prevent damage to the indicator or load cells, the scale must be unloaded immediately.

TILTED POSITION

The display shows small bars when the system is in a tilted position larger than 2°. In this case, the weighing system must be placed in a horizontal position. After this, the system continues executing any commands.

ERROR MESSAGES INDICATOR

Displayed error	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
Err05	Sampling accuracy too low	Press any key
Err06	Input signal too high	Automatic after correcting input
Err07	Input signal too low	Automatic after correcting input
Err08	Calibration out of range (negative)	Automatic
Err09	Calibration out of range (signal too low)	Automatic
Err10	Calibration count 2nd(3rd) point lower than count 1st(2nd) point	Automatic
Err14	Setpoint value 2 < setpoint value 1. This is not allowed	Automatic
Err98	Calibration point must be higher than previous one	Automatic
Err99	Action only allowed in start-up units	Automatic

3. FUNCTIONS INDICATOR

3.1. GRADUATION

From 0 to 5000 lbs the weight is shown in 2 lb steps.

3.2. BEFORE WEIGHING: CHECK ZERO POINT

Before each weighing it is necessary to check whether the system is unloaded and free. The indicator is fitted with an automatic zero correction. This means that small deviations of the zero point will be corrected automatically. If the indicator does not determine the zero point automatically, it must be done manually using the >0< key.

3.3. GROSS WEIGHING

After lifting a load, the display shows the gross value of the weighed load.

3.4. NET WEIGHING: AUTOMATIC TARE

The indicator offers the possibility to reset tare weights to zero automatically. This way added or subtracted can be determined.
- Lift load.
- Press key ↔T.
   - The indicator is set to zero.
   - The "NET" pointer shows that a tare weight is activated.
- Place or remove the net load.
   - The display shows the net value of the weighed load.
   - When removing load, this is a negative value.
- By pressing the ↔T key again, the gross weight is displayed.

3.5. NET WEIGHING: MANUAL TARE ENTRY

A tare weight can be entered at any moment, either in a loaded or unloaded situation.

- Press the →PT key for 3 seconds.
   - The display shows the current tare value.
   - The right digit is flashing.
- Press ENTER(↵) if the current tare value is required.

Or

➢ Press the →PT key for 3 seconds.
➢ Press the ∧ key to go up a value or press the ∨ key to go down a value until the required value is reached.
➢ Press < to change to the next digit.
➢ Repeat this procedure until the required tare value is displayed.
➢ Press ENTER (↵) to activate the tare weight.
    ❑ The tare weight is activated.
    ❑ The "NET" pointer lights up.
    ❑ When the system is loaded, the net value appears in the display
    ❑ When the system is unloaded, the read-out displays the negative value of the given tare.
    ❑ The entered value remains active until a new tare weight is entered (display shows the new net weight).
    ❑ Press the ↔T key to return to gross weighing mode.

3.6. PIECE COUNTING: SAMPLING

If an unknown piece weight is to be determined you may do this by sampling a certain number of pieces. The number of pieces taken from or placed on the scale determines the accuracy of the sampling. The total weight of the pieces taken from or placed on the scale for the sampling should be no less than 9-10 lb. The greater the weight difference, the greater accuracy. The standard sampling amount is 10 pieces, but this number can be increased up to 95 pieces.

➢ Press the ⚖ key.
    ❑ The display shows "add10". The 'lb.' pointer turns off and the 'pcs' pointer goes on.
➢ Take or place 10 pieces from/on the scale and press the ENTER (↵) key.
    ❑ The sampling is done and the display will show the total number of pieces on the scale.
Or
➢ Press the ∧ key or the ∨ key to change the number of pieces to add.
    ❑ The display will show the new value to add. (for example "add50")
➢ Take or place 50 pieces from/on the scale and press the ENTER (↵) key.
    ❑ The sampling is done and the display will show the total number of pieces on the scale.

To return to the normal weighing mode press the ↻ key for 3 seconds.

3.7. PIECE COUNT: ENTER A PIECE WEIGHT

➢ Press the ⚖ key for 3 seconds.
    ❑ The last used piece weight will be displayed with the right digit flashing.
➢ To accept the old value press ENTER (↵).
    ❑ The display shows the number of pieces currently on the scale.

Or
➢ Change the piece weight value by using the ∧ or ∨ and < keys.
   ❑ The display shows the new piece weight.
➢ To accept the new value press ENTER (↵).
   ❑ The display shows the number of pieces currently on the scale.

To return to the normal weigh mode press the ↺ key for 3 seconds.

3.8. TOTALING

The indicator offers the possibility to add weighings and show the total weight. When a tare weight is active, the net weight is added automatically.

➢ Load the system with the weight that should be added.
➢ Press the ⊕ key to add the weighed load to the total weight.
   ❑ The display shortly shows the message "ADDED" and then automatically returns to the weighing mode.

Note that no weight can be recorded twice. The system needs to be returned to the net zero-range before another weight can be added up.

➢ The subtotal can be checked by pressing the ⁂ key for 3 seconds. This can only be done when there the scale is not loaded.
   ❑ The display shows the net total weight and the number of weightings totalled so far repeatedly for 3 seconds.
      ➢ If the ⊕ key is pressed shortly during this period, the total is printed out (if option is installed) and reset to 0.
      ➢ If the "CE" key is pressed during this period, the total is reset but not printed out.
      ➢ If no key is pressed during this period, the subtotal stays in memory and the system returns to the weighing mode after 60 seconds.
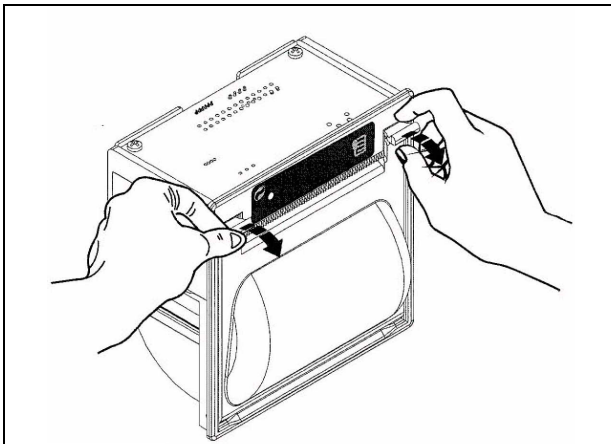

3.9. CHANGE UNITS

The system is set to start up in 'lbs' or in 'kgs'. However you may, at any time in the weighing mode, change to the second unit (lb⇔kg or kg⇔lb).
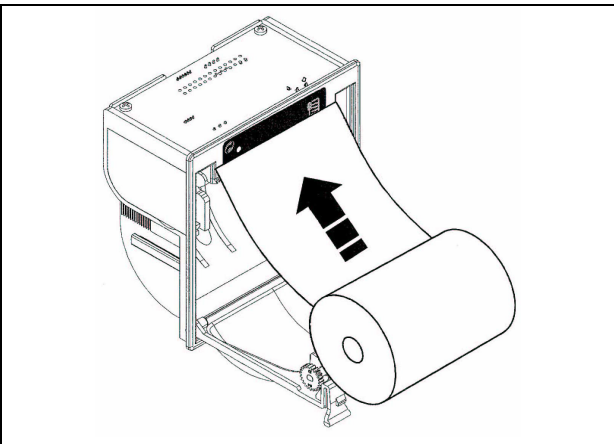
➢ Press the ↺ key for 3 seconds.
   ❑ The display will show the current weight in the new units for 5 seconds and then automatically change back to the start up units.

The same key is used to change from the piece counting mode back to the weighing mode. (See 4.6./4.7).
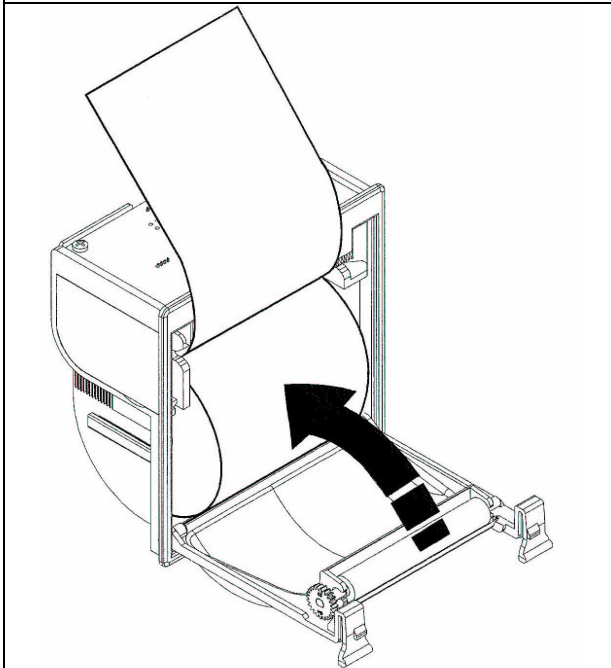
3.10. CHANGING THE THERMAL PAPER ROLL
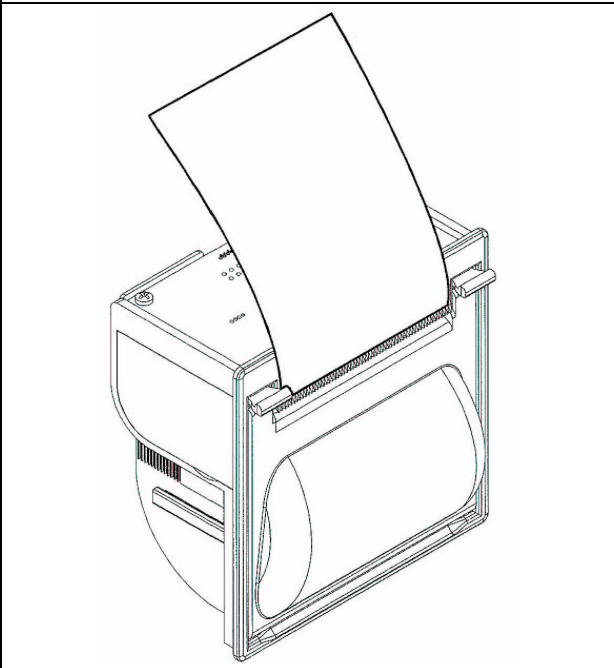

Open the printer cover by pressing down the 2 levers and pulling the cover towards you.	Remove the existing paper roll. Position the new paper roll, making sure it unrolls in the correct direction, as shown above.
Unroll the paper slightly. Re-close the cover, holding the edge of the paper.	The printer is now ready for use.

4. SAFETY INSTRUCTIONS

1.   NEVER lift a heavy load with just the points of the forks. This could damage the electronic
     weighing elements permanently.
2.   NEVER weigh without a pallet. This could affect the accuracy of the weighing result.
3.   We advise you not to move any weights above 1650 lb. (750 kg) with the unit. Human beings are not built for that kind of labour. However the unit may be loaded with weights up to 5000 lb.
4.   Use caution in the vicinity of moving parts - these parts can cut and/or crush hands, arms, feet and legs.
5.   Always center the load you are lifting on both the forks.
6.   Do not operate the weighing system on ramps, inclines or declines, without the addition of our optional parking brake.
7.   Do not operate the weighing system while other employees are on or near the unit. <u>No riding</u>!
8.   All modifications must be approved in writing from the supplier, prior to any work being completed.
9.   It is the sole responsibility of the purchaser to train their own employees in the proper use and maintenance of this equipment.
10. Do not operate this unit unless you have been fully trained by your employer.
11. Do not use the weighing system in potentially explosive areas.
12. Do not carry passengers with the truck.
13. Do not weld or make changes to the weighing system without consulting the supplier.
14. Do not lift unstable loads.
15. Check the accuracy of the scale on a regular basis to prevent faulty readings.
16. Only trained and authorized personnel are allowed to operate the truck.
17. Always follow the operating, maintenance and repair instructions of this truck and ask the supplier when in doubt.
18. Never lower loads if you are not sure if you place the goods on a stable floor or potentially can hurt other persons.
19. Always remain with the scale during dosing applications. Incorrect lifting of the pallet can cause overflowing.
20. RAVAS is not responsible for errors that occur due to incorrect weightings or inaccurate scales.