110 Series

Operators Manual

51636

Rev 1 07/23

OPERATORS MANUAL
110 Series

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Contact Us:

www.fairbanks.com

Rev.20170509

1. SAFETY INSTRUCTIONS

1. **NEVER** lift a heavy load with just the tip 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. The unit may be loaded with weights up to 5000 lb. However we advise you not to **move** any weights above 1650 lb. (750 kg) with the unit. Fairbanks is not responsible for injury that may result when moving heavy loads.

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 others are on or near the unit. **No riding!**

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 of its capabilities.

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 unsure you can place the goods on a stable surface. Personal injury may result from placement on an unstable environment.

19. Always remain with the scale during dosing applications. Incorrect lifting of the pallet can cause overflowing.

20. Fairbanks is not responsible for errors that occur due to incorrect weighings or inaccurate scales.

2. SYSTEM SET UP

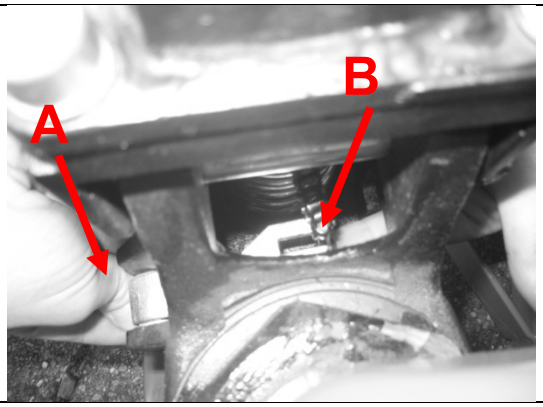
Installation of pump handle (Your local dealer may have done this)

Make sure the lever is pushed down to the “pump” position.

Thread the chain through the hole in the triangle and through the hole in the axle.

Place the handle bar onto the triangle and insert the bolts.

Tighten the bolts firmly.



Push the silver part “A” on the outside of the pump downwards.

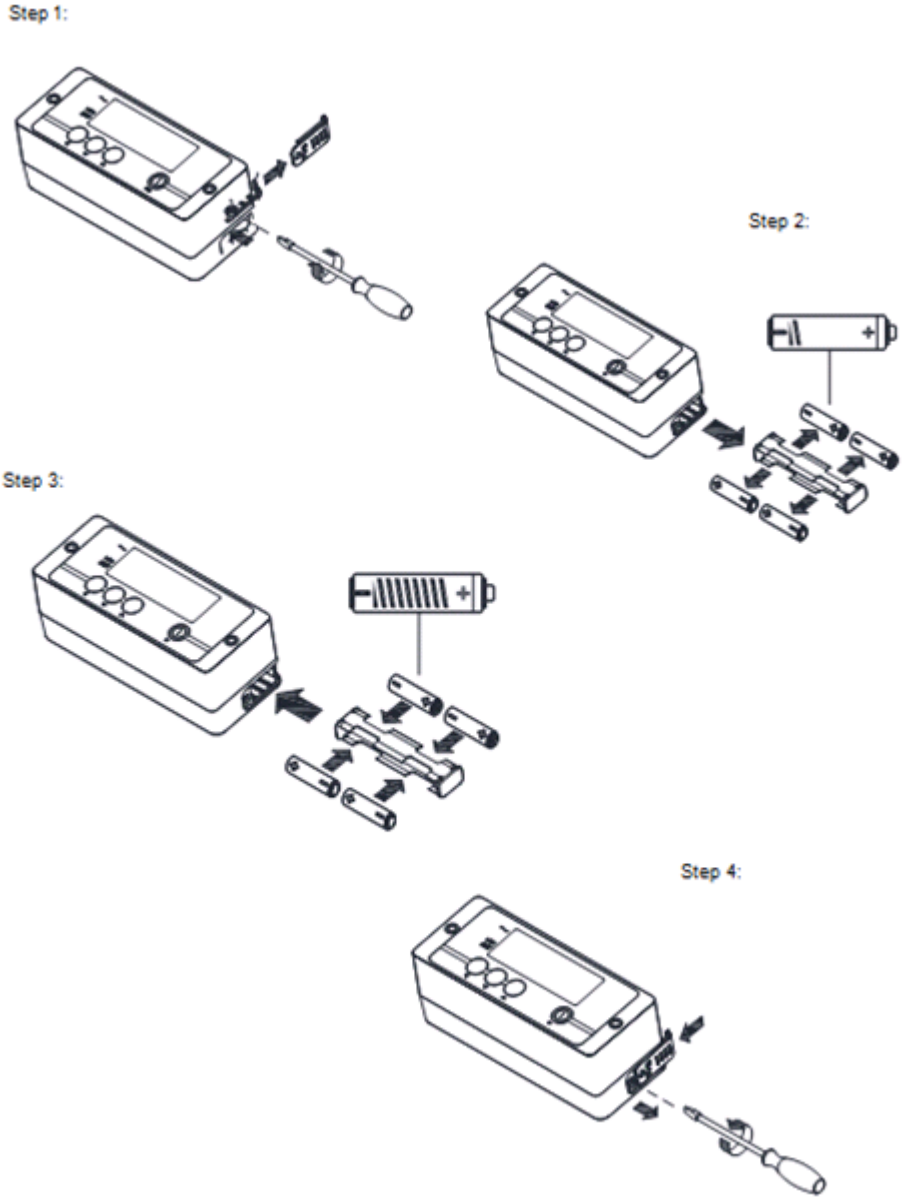
At the same time; insert the chain into the open side of the slot “B” on the inside of the pump.

Installing the batteries (Your local dealer may have done this)

The power supply to the system takes place through 4 AA batteries. When used normally, the batteries will last for about 1 year.

When the voltage level of the batteries is running low, the display will show “LO-BA“. When the batteries are completely empty, the weighing system shuts off.

To replace the batteries:



3. OPERATION MANUAL

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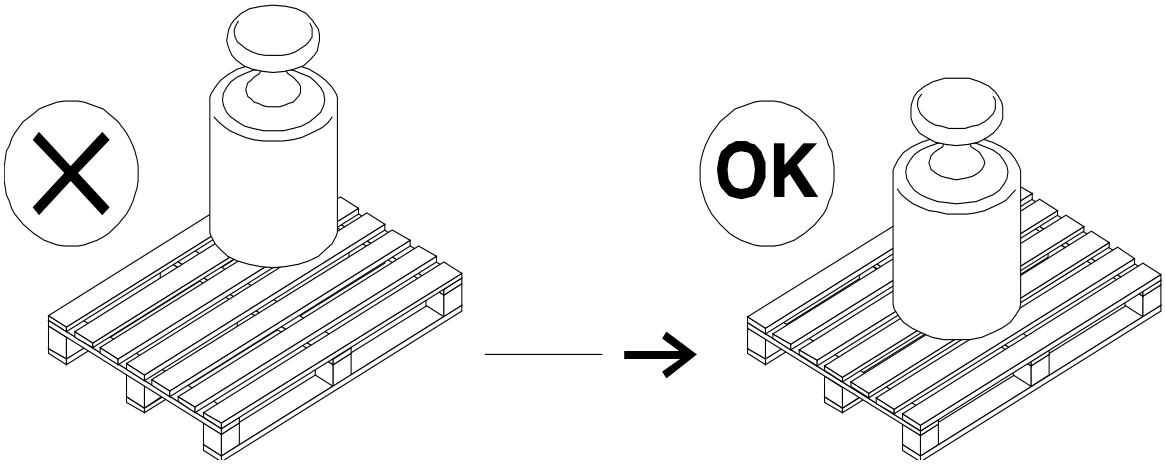
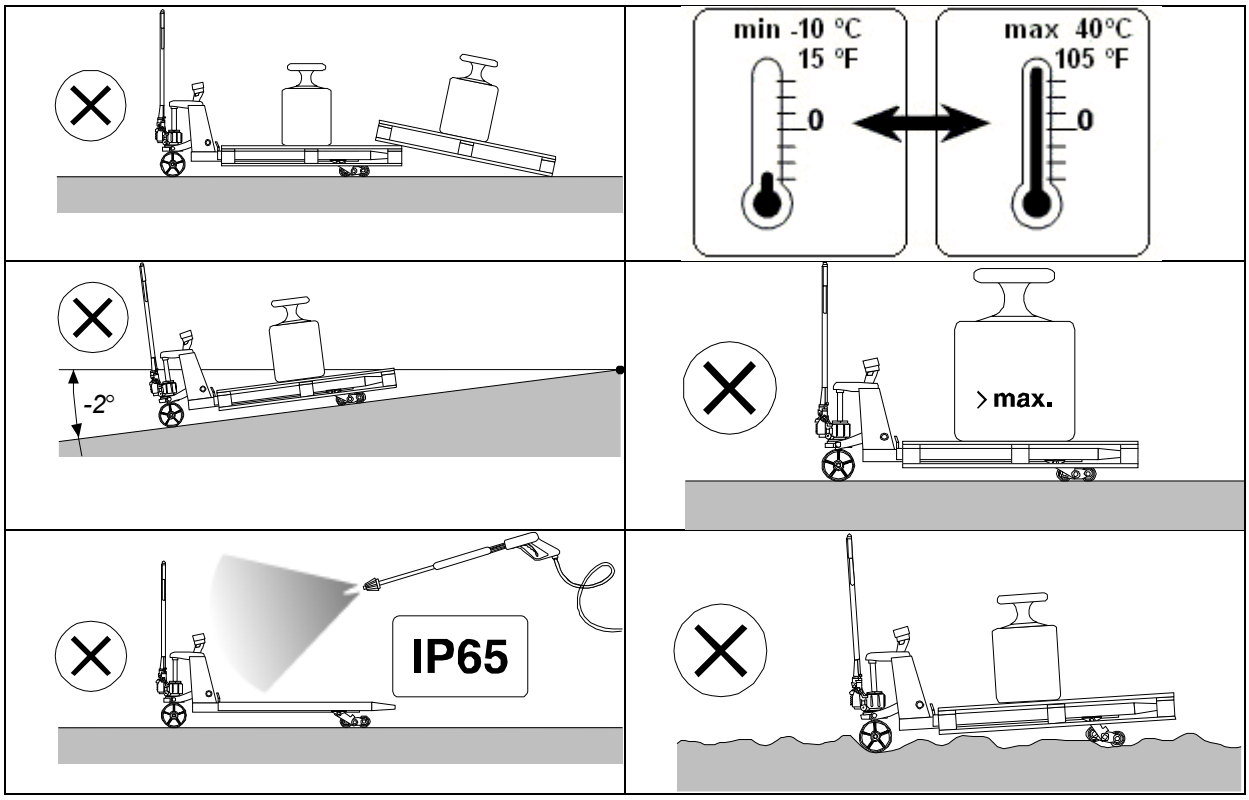
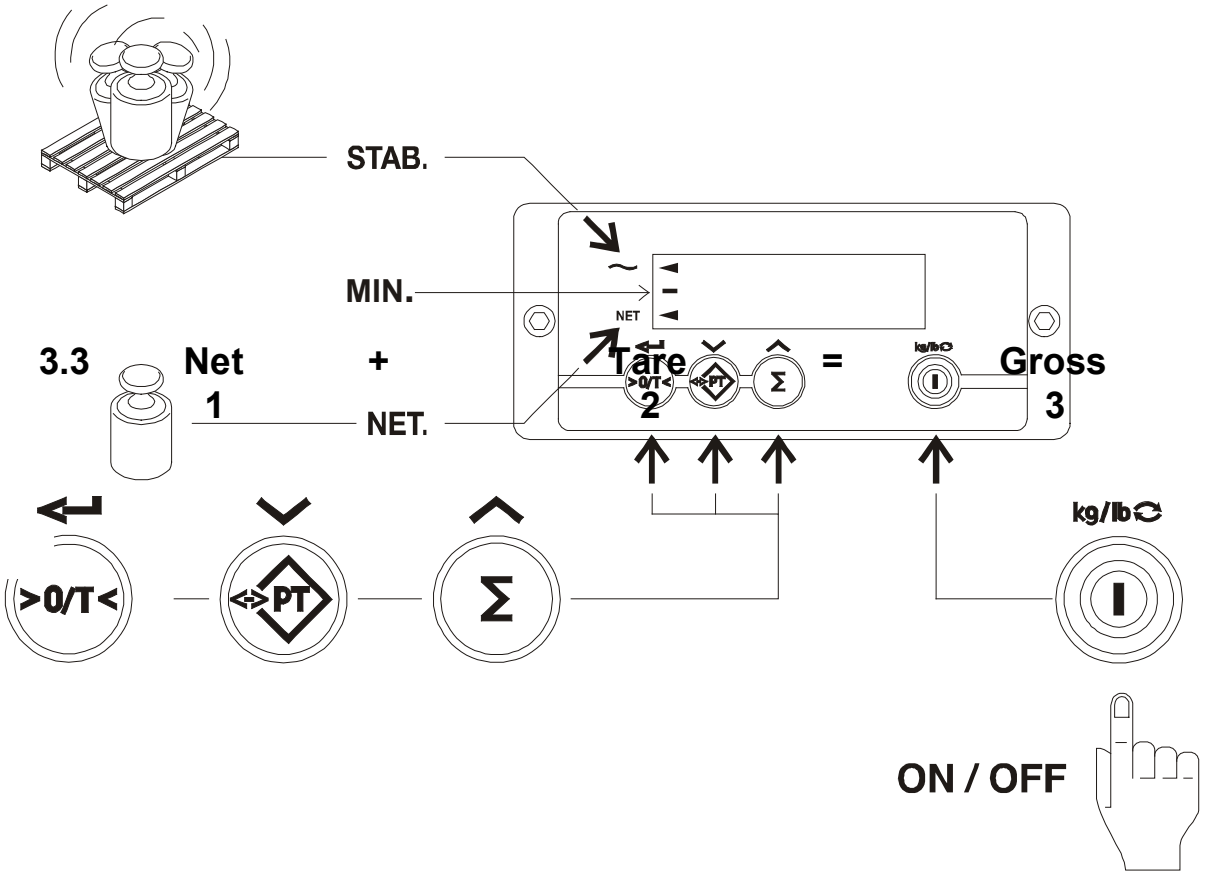
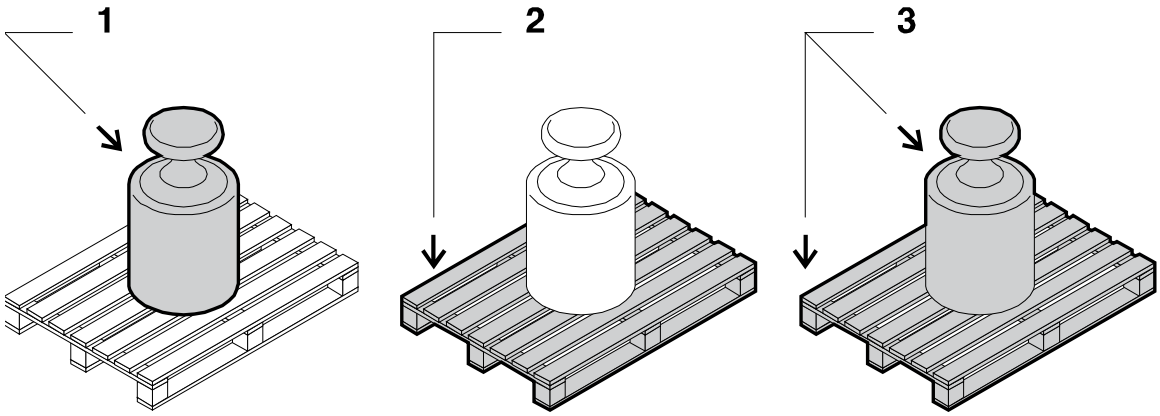
3.1 Accurate Weighing



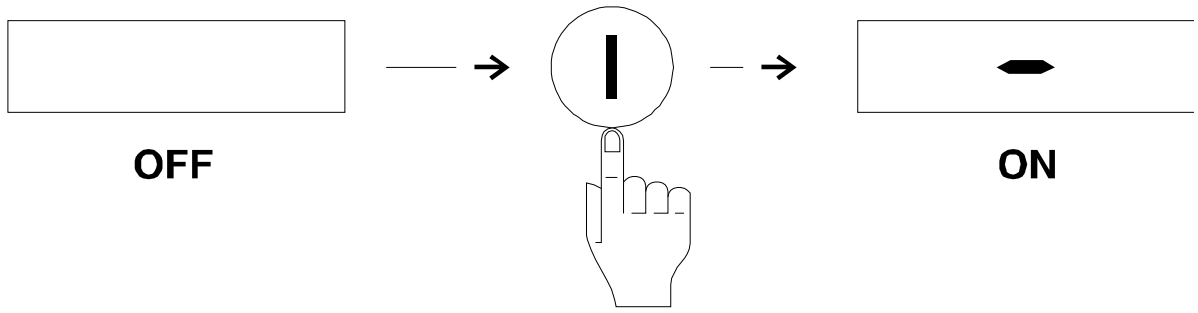


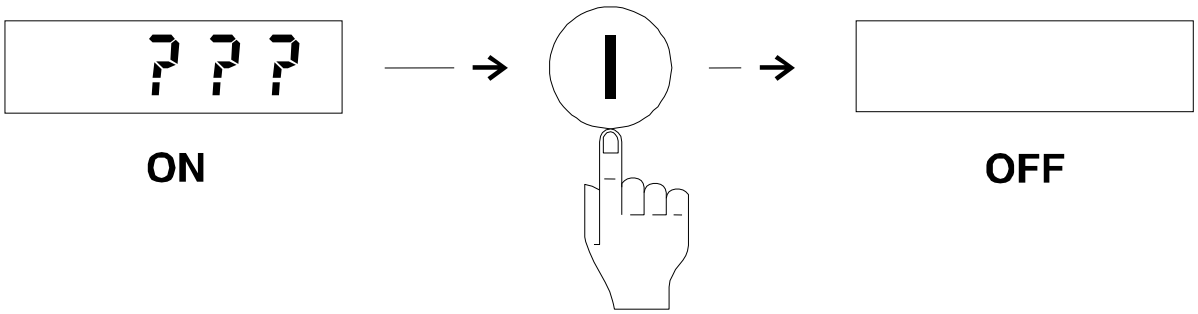
3.2 Touch Panel Indicator



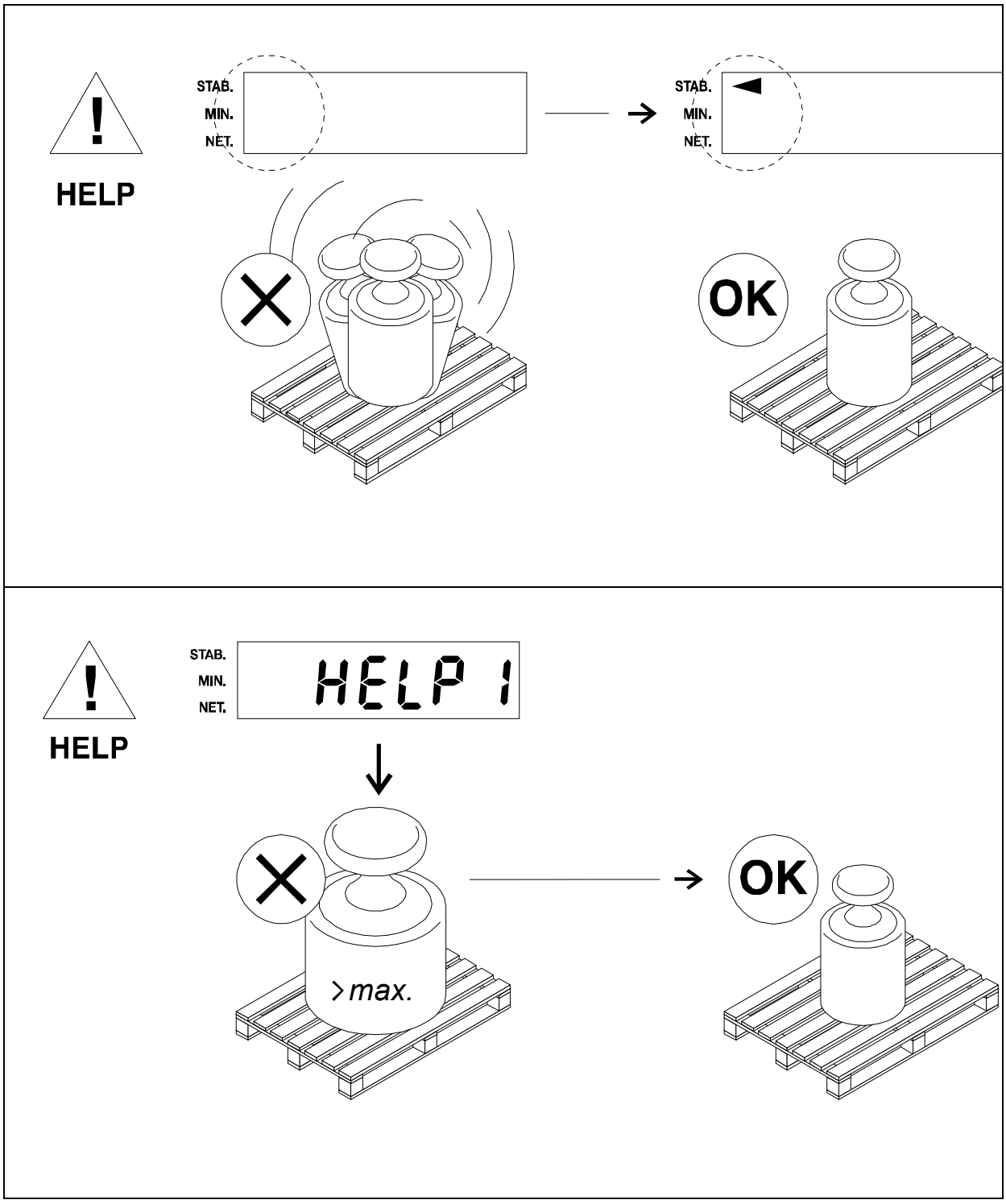


3.4 On / Off



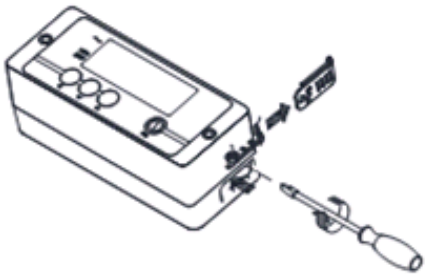


3.5 Error Messages

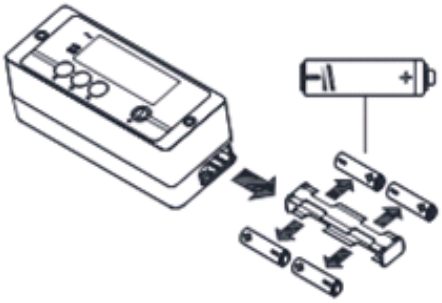


HELP

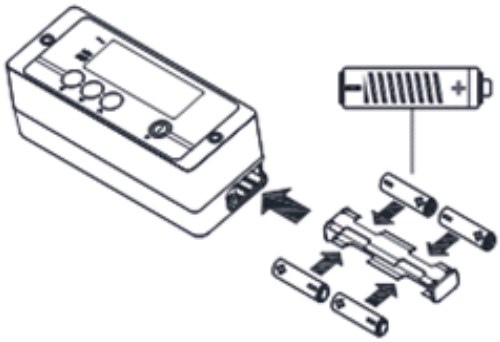
Step 1:



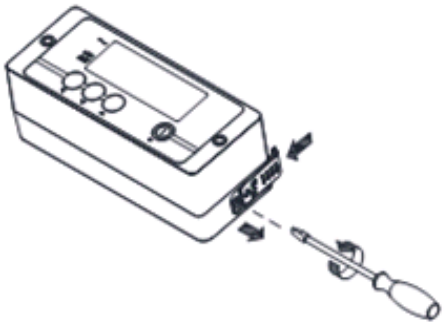
Step 2:



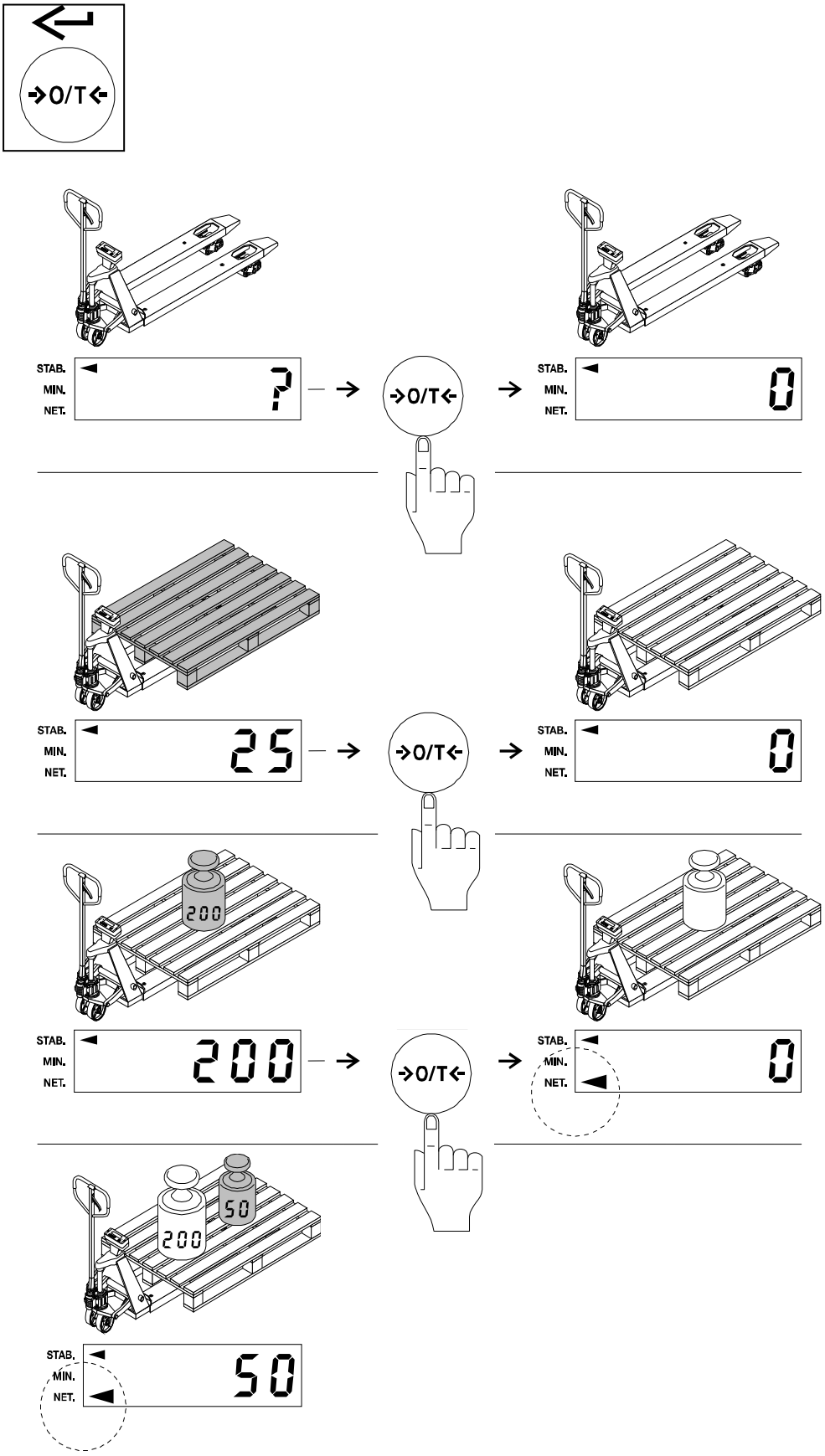
Step 3:



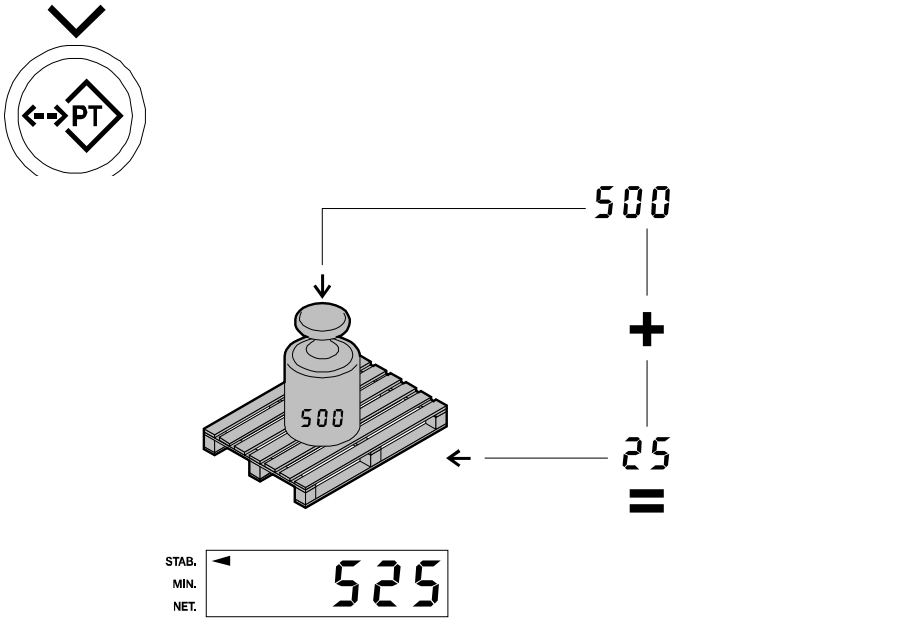
Step 4:

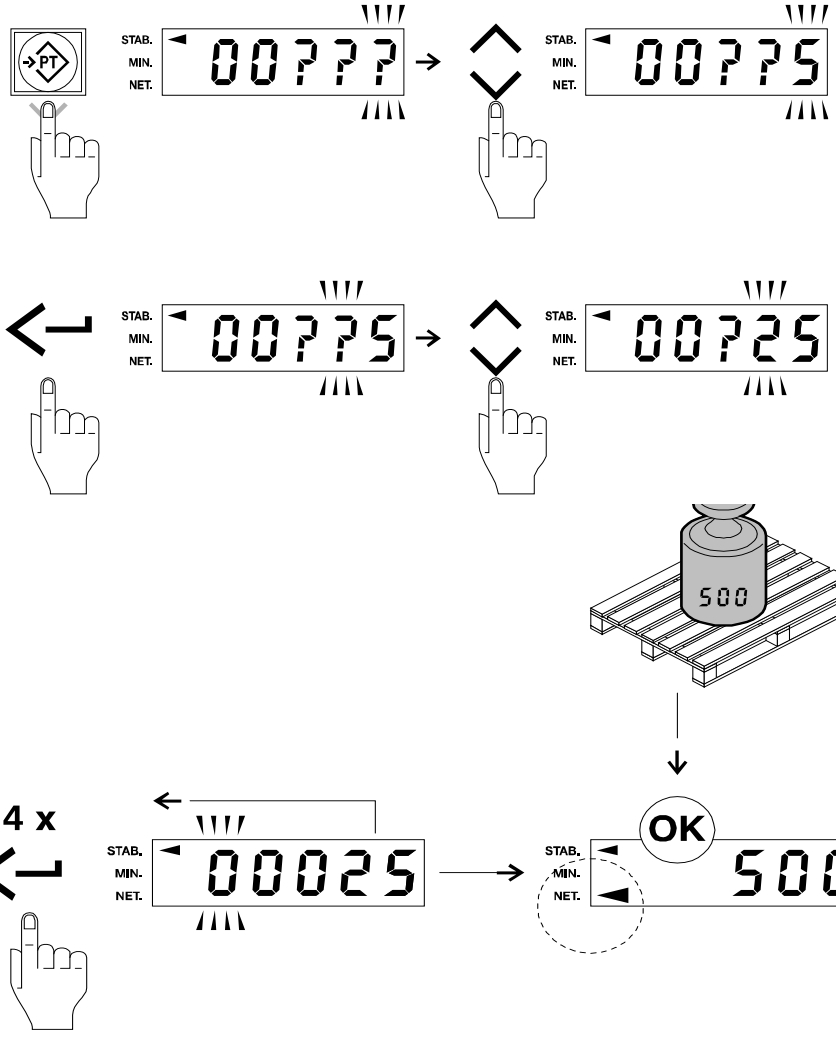


3.6 Zero and Tare Functions

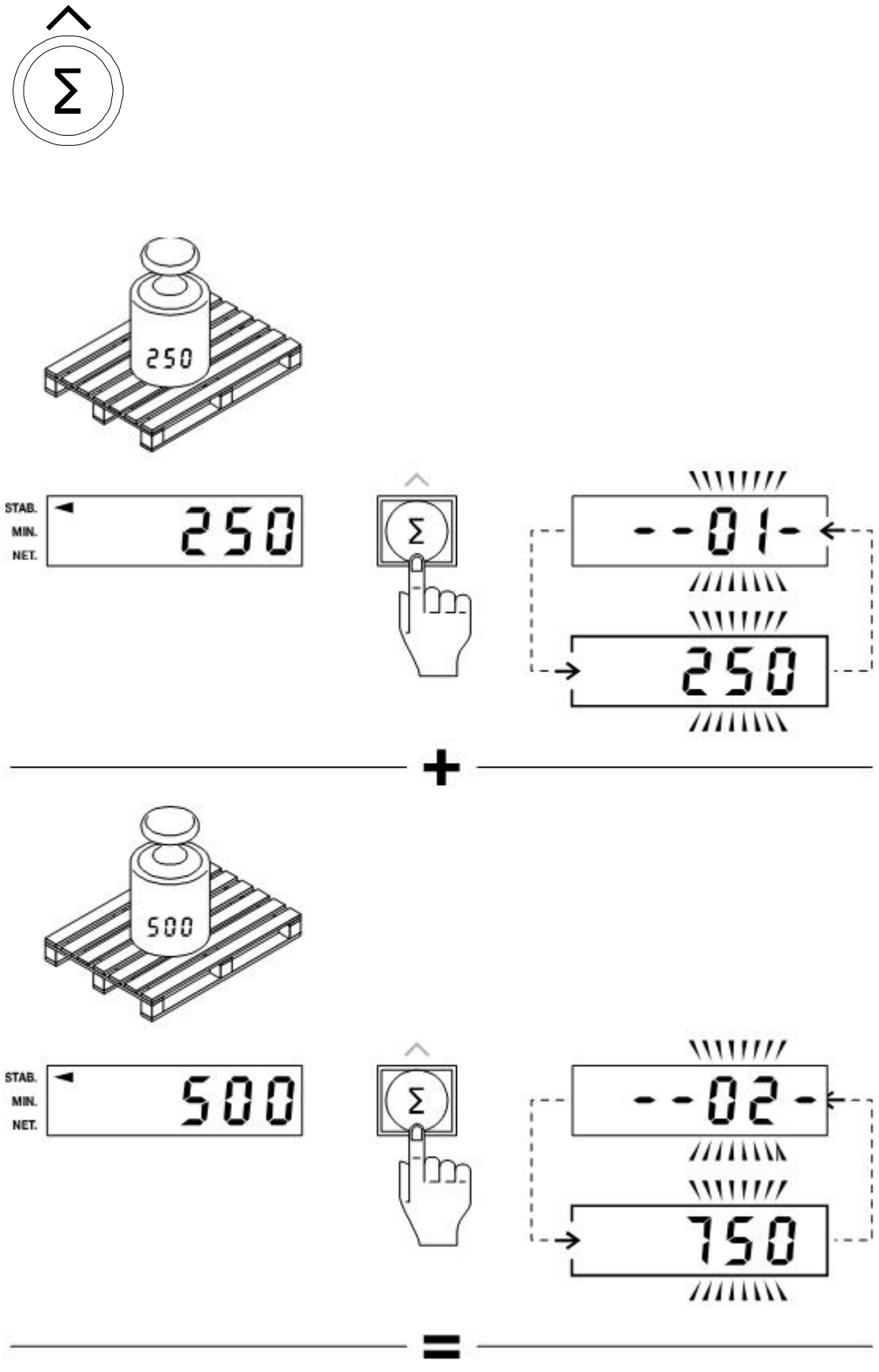


3.7 Manual Tare Entry

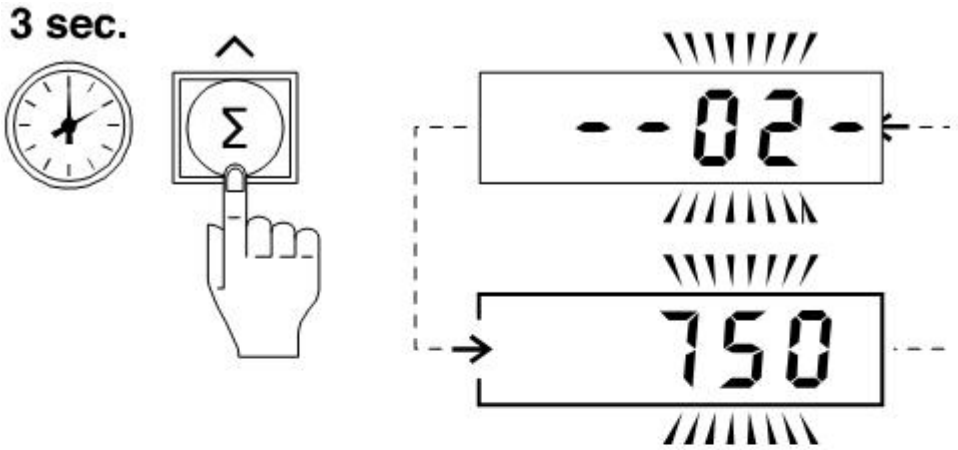


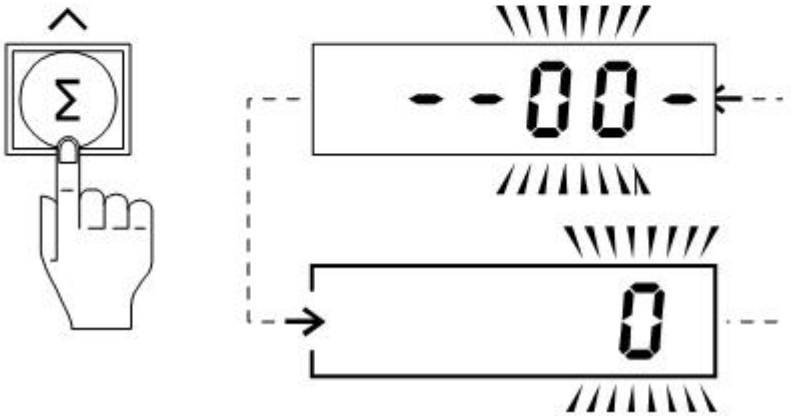


3.8 Summing



3.9 Total and Reset





4 TROUBLESHOOTING

No power	Change batteries	4x AA batteries cells	See page 11
			Batteries have been entered the wrong way.
Accuracy	No repeatability	Check if there is a mechanical problem.	Load left and right fork with for example body weight and see if weight changes when you are in different positions on the scale. There should not be a difference larger than 2 lb. If there is a bigger difference then 5 lb you have a load cell or a mechanical problem.
			To make sure it is a mechanical problem, repeat test with a heavy load on the scale, Lift a pallet with 2000 or 3000 lb. Reset Indicator for 0 lb using the tare function. Load corners with body weight by standing on or on the sides of the pallet. If readings change more than 5 lb you have a mechanical problem.
			The push rods in the forks may not interfere with the load cells. Take of the fork shoe by unscrewing the nuts on the bottom side of the pallet truck. Push the pushrods sideways towards the load cells to see if they come in contact with the load cells: see if they can interfere with the load cells.
			With the forks lifted half way up, the brackets for the loading wheels may touch the fork shoe. By taking off the fork shoe, Scratches will show if it does and where it does.
			Check if bolts are loose.
		Check the load cells. If one is broken or gives more or less signal than the others, the scale will give different reading depending how it is loaded.	To be sure that it is not a mechanical problem, load the load cells directly. Take off the fork cover. Try to apply weight 25 to 50 kg / lb, direct onto each load cell. If the indicator shows the same reading, the load cells are OK.
			Tap with a hammer onto the load cells. Do not be afraid to break it. Repeat test for each load cell.
			Measure resistance with ohm meter between wires and load cell body. Do this with the other load cells disconnected from indicator. No resistance is allowed.
			The load cells should have +/- 350 ohm between the signal wires: yellow and green, and excitation wires, black and red.
		Check cables	Bad connections will cause changes when moving the scale.
			Bend and move the cable briskly especially where the cable is moving continuously while lifting. While doing so, look at the display to see if it reacts to the movements.

		The potentiometers with which we calibrate the output of the load cells, are mechanical parts therefore, higher risk components	Move the board and but pressure with fingers on the potentiometers while looking at the display to see if it reacts. Do not touch the contact itself.
	Not linear	Check if it is load cells or indicator	Load cells or indicator are very rarely the cause of this problem. Easiest way to check is by changing the indicator temporarily. If problem is not solved when changing the indicator, the problem is the load cell, cable or mechanics
		Check cable	Very rarely the cause. Maybe in a lift truck.
Instability	With no load it is most of the time humidity, bad connection or component r bad shield.	Check for humidity	Check for water marks on the indicator board or load cell connections (potentiometers).
		Check the indicator.	Sometimes the indicator will show a weight when load cells are disconnected. If you do this and the indicator becomes more stable, it is most likely elsewhere in the system.
			Check visually for traces of oxidation. If found heating the solder contacts can solve the problem.
		Check cables. In warehouse and lift truck the cable is working all the time when following the lifting movement. It may be worn or damaged. Changing temperatures and chemicals have an effect on the lifetime of a cable.	Bad connections will cause changes when moving the scale.
			Bend and move the cable briskly especially where the cable is moving continuously when lifting. While doing so, look at the display to see if it reacts to the movements.
		The potentiometers with which we calibrate the output of the load cells are mechanical parts and are sensitive to humidity, shocks and vibration.	Move the board and but pressure with fingers on the potentiometers while looking at the display to see if it reacts. Do not touch the contact itself.
		Check the load cells.	If connected independently to the indicator, it can be checked which one is unstable and which one is not.
	With load	Check mechanics.	
Function error	No reaction when pushing keys	Check the touch panel	Test can be done by making short cut on connection of the touch panel to simulate a key being pressed. Check for wear of broken contacts in the flat cable going to the indicator board
		Lock up	Take out the batteries and replace to see if it starts up afterwards.

	Not summing	Operator error .	Load is not stable. Scale needs to be unloaded before accepting new print. System will not print weights that are smaller than the graduation.
HELP messages	HELP 2	Scale is overloaded	Take load from scale. If there is no load do the same checks as you do with HELP 3 and 7.
	Help 3 or 7	Load cell signal too high or too low.	Check cables for damage. Move the cable while looking at display to see if indicator reacts.
			Measure load cells to see if they are fine.
			Check the excitation signal of the indicator
	Help 4	Out of zero range	Zero calibration needed.

5 Maintenance

The pallet truck is largely maintenance free.

5.1. Oil

Please check the oil level every six months. The oil can be hydraulic oil: ISO VG32, its viscosity should be 30cST at 400 C, total volume is about 0.4lt.

5.2. To Remove Air from the Pump

Air may come into the hydraulic oil during transportation or if the pump has been turned upside down. It can cause the forks not to elevate while pumping in the raise position. The air can be removed in the following way: put the control handle (117) to the lower position, then move the draw-bar up and down several times.

5.3. Daily Check and Maintenance

Daily check of the pallet truck with scale can limit wear as much as possible. Special attention should be paid to the wheels, the axles, as thread, rags, etc. may block the wheels. The forks should be unloaded and lowered in the lowest position when the job is over.

5.4. Lubrication

All bearings and shafts are provided with long-life grease at the factory. You only need and long-life grease at monthly intervals or after each time the lubrication points of the truck are cleaned thoroughly.

5.5. Battery Replacement

A) Remove the screw (238-7) and the battery cover (238-8).
B) Use 4 new "AA" batteries (238-9) to replace the old ones.
C) Replace the battery cover (238-8) and tighten the screw (238-7) securely.

5.6. Maintenance of Display Unit

The weighing system 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

6 PARAMETER SETTINGS

- Switch off the indicator.
- To activate the parameter menu press and hold the on/off-key until the indicator shows “P 01” (approx 23 seconds).
  - ❏ The indicator shows: “P 01“.
- Press the →0/T← key.
  - ❏ The indicator shows the current value of parameter P 01.
- Use keys ▼ and ▲ to change the current value.
- Confirm with →0/T←.
  - ❏ The indicator shows: “P 02“. Parameter P 02 can now be changed in the same way as P 01.
  - ❏ To scroll through the parameters press the ▲ key until the desired parameter is reached.
  - ❏ To jump back to “P 01”: quickly press and release the on/off-key while a parameter number is shown in the display.
- When all desired parameters have been changed, press the →0/T← key for 3 seconds to leave the parameter menu and to return to the weighing mode.

Listed below are all available parameters.

- Settings for specific options are indicated with an asterisk (*).
  Contact the producer to check whether you have the correct hardware for this option.
  If the hardware is not suitable for a certain function, it will not be possible to activate or change that function.
- The factory settings for your board can be found in the table. Contact the producer to check which hardware version you have.

P Nr.	Function	Possible settings	advised settings per option		Default setting after P90	Remark
			Standard	Optional Printer		
P 01	Delay time peakhold	0 /7	**0**	**0**	**0**	**not functional for hand pallet truck scales (RCS only)**
P 02	smallest division step	0.1/0.2/0.5/1/2/5/10/20/ 50/100	**2**	**2**	**1**	
P 03	largest division step*1	0.1/0.2/0.5/1/2/5/10/20/ 50/100	**2**	**2**	**1**	
P 04	Multi interval window adjustable per 100 divisions	0000-9900	- - - - -	- - - - -	- - - - -	
P 05	overload (full scale) adjustable per 100 divisions	00000-99900	**5000**	**5000**	**2000**	
P 06	motion detection in div/sec.	0=0.5, 1=1, 2=2, 3=4	**1**	**1**	**1**	
P 07	not defined				- - - - -	
P 08	auto shut-off time in minutes	0 t/m 99 (0 = off)	**30**	**30**	**3**	
P 09	number of loadcell wires	4 of 6	**4**	**4**	**4**	
P 10	Zerotrack on/off	0 = off en 1 = on	**1**	**1**	**1**	
P11	read out display for service purposes	0-3 0=basic , 1=mV/V, 2= 5x higher resolution , 3= 10x higher resolution	**0**	**0**	- - - - -	
P 12-	power-up and calibration units	0 = kg (units toggle switch not activ)	**3**	**3**	**2**	
		1 = lb (units toggle switch not activ)				
		2 = kg/lb (units toggle switch activ)				
		3 = lb/kg (units toggle switch activ)				
P 13	not defined				- - - - -	
P 14	not defined				- - - - -	
P 15	not defined				- - - - -	
P 16	not defined				- - - - -	
P 17	Peakhold function	0/1	**0**	**0**	**0**	**not for hand pallet truck scales (RCS only)**
P18-P19	not defined				- - - - -	
P20	Baudrate	1200,2400,4800,9600,19200,38400	**9600**	**9600**	**9600**	

P21	Databits	7/8	**8**	**8**	**8**	
P22	parity	E(ven), -(None), O(dd)	**-**	**-**	**-**	
P23	Stopbits	1/2	**1**	**1**	**1**	
P 24-	not defined				- - - - -	
P25	application RS232-interface	0 = Standard (remote display output via RS232) 1 = Standard with printer 2-7 not used	**0**	**1**	**0**	
P26	number of linefeeds	0-7	**5**	**5**	**5**	
P27 - P89	not defined				- - - - -	
P 90	reset to default settings				**FP**	**resets all parameters to the default factory settings**
P 91	not defined				- - - - -	
P 92	Low Battery	0 = off (no LO-BA in the display, with blinking battery sign, no automatic power off after 2 minutes), 1 = on (LO-BA in the display, with blinking battery sign , indicator is powered off after 2 minutes).	**1**	**1**	**1**	
P 93	disabling function keys	0 = all keys activated 1 = PT-key deactivated 2 = ∑-key deactivated 3 = PT-and ∑-key, all pointers and motion indicator deactivated	**0**	**0**	**0**	
P 94	not defined				- - - - -	
P 95-P98	not defined					
P 99	software version	754	**754**	**754**	**754**	