



Simple weighing system T10

Bedding and feeding





Dear Owner

In buying a Kuhn machine you have chosen wisely. Into it have gone years of thought, research and improvement. You will find, as have thousands of owners all over the world, that you have the best that engineering skill and actual field testing can produce. You have purchased a dependable machine, but only through proper care and operation can you expect to receive the performance and long service built into it.

This manual contains all the necessary information for you to receive full efficiency from your machine. The performance you get from this machine is largely dependent on how well you read and understand this manual and apply this knowledge. Please **DO NOT ASSUME YOU KNOW HOW TO OPERATE AND MAINTAIN YOUR MACHINE** before reading this manual carefully. **KEEP THIS MANUAL AVAILABLE FOR REFERENCE.** Pass it on to the next owner if you re-sell the machine.

Your KUHN dealer can offer a complete line of genuine KUHN service parts. These parts are manufactured and carefully inspected in the same factory that builds the machine to assure high quality and accurate fitting of any necessary replacements.

■ About improvements

We are continually striving to improve our products. It therefore reserves the right to make improvements or changes when it becomes practical to do so, without incurring any obligations to make changes or additions to the equipment sold previously.



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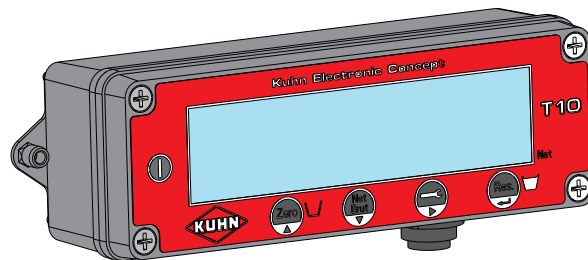
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Weighing system identification

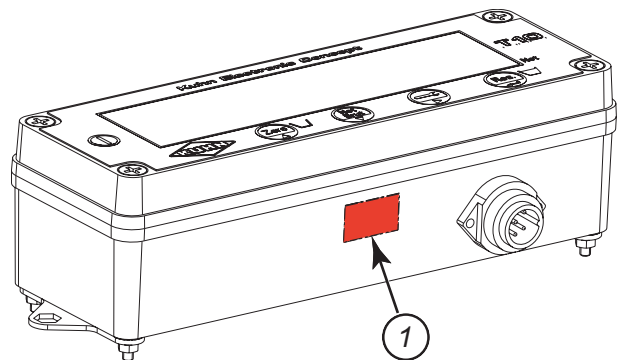
1. View of the terminal T10



2. Manufacturers' marking

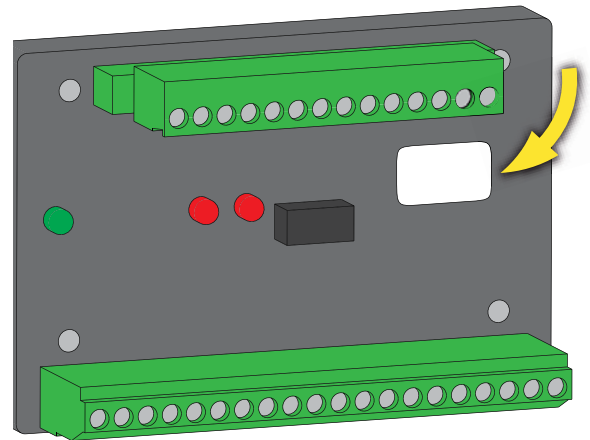
Please write below the type and serial number of the machine. This information is to be indicated to the dealer for all spare parts orders.

- Description: T10
- KUHN reference:
- Software version:



Software part number

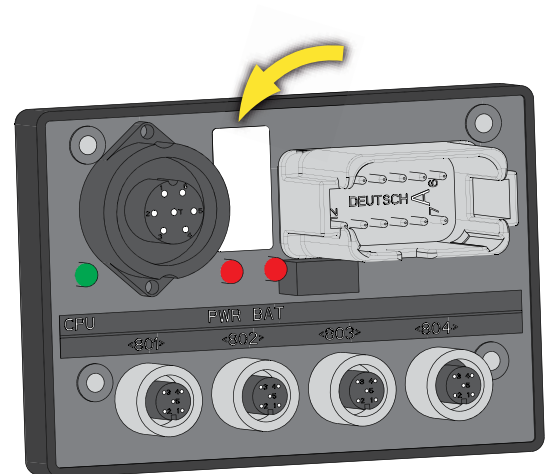
- Description: M12
- KUHN reference:
- Software version:



- Description: M13
- KUHN reference:
- Software version:



This information can be found on the back of the T10 box and on the M12/M13.



3. Optional equipment

Tick box corresponding to the equipment fitted on your machine:

- Remote display
- Battery

Safety

1. Description of symbols used in this document

This symbol indicates a potentially hazardous situation that if not avoided, could result in serious bodily injury.



This symbol is used to identify special instructions or procedures which, if not followed strictly, could result in machinery damage.



This symbol is used to communicate technical information of particular interest.



2. Safety instructions

■ Introduction

The machine must only be operated, maintained and repaired by competent persons who are familiar with machines' specifications and operation and aware of safety regulations for preventing accidents.

The operator must imperatively respect safety instructions in this manual and in the warnings posted on the machine. The operator is also obliged to respect current legislation concerning accident prevention, work safety and public traffic circulation.

Designated use of the machine also means following operation, maintenance and repair recommendations given by the manufacturer, and using only genuine spare parts, equipment and accessories, as recommended by the manufacturer.

The manufacturer is not held liable for any damage resulting from machine applications other than those specified by the manufacturer. Any use other than the designated operation is at the risk and responsibility of the operator.

The manufacturer is not held liable for any damage or accident resulting from machine modifications carried out by the operator himself or by a third party without previous written agreement from the manufacturer.

■ Read and follow the safety instructions

Before using the machine, carefully read all the safety instructions in this manual and the warnings placed on the machine.

Before starting work, the operator must be familiar with all machine controls, handling devices and their functions. It is too late to learn once work has been started!

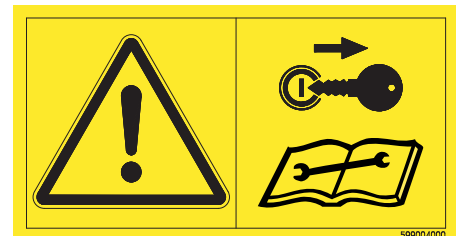
Never let anyone operate the machine who is not trained to do so.

Should you have any difficulties in understanding certain parts in this manual, please contact your KUHN dealer.



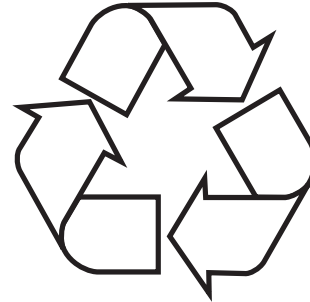
■ Precautions to be taken before carrying out any operations on the machine

Before leaving the tractor or before adjusting, maintaining or repairing the machine, disengage the PTO drive, turn off the engine, remove ignition key and wait until all moving parts have come to a complete stop and apply park brake.



■ Waste disposal

Respect the environment! Never spill pollutants (oil, grease, filters, etc.) on the ground, never pour them down the drain and never discard them in any other place where they could pollute the environment. Never throw away or burn a tyre. Always take waste to specialized recycling or waste disposal centers.



■ Precautions for maintenance and repair work

Before leaving the tractor or before adjusting, maintaining or repairing the machine, disengage the PTO drive, turn off the engine, remove ignition key and wait until all moving parts have come to a complete stop and apply park brake.

Rest the machine on the ground, release the pressure from the hydraulic circuit and leave the machine to cool down.

Make sure that the parts of the machine that need to be lifted for maintenance or repair work are firmly propped up.

Before any work is done on the electric circuit or before any electric welding is carried out on the attached machine, disconnect the machine from the tractor electrical circuit. Also disconnect alternator and battery terminals.

Repairs on elements under pressure or tension (springs, pressure accumulators, etc.) must only be carried out by competent persons with regulation equipment.

Wear the appropriate protective clothing for the work in hand (gloves, shoes, goggles, helmet, ear defenders, etc.).

Do not solder, weld or use a blow torch near fluids under pressure or inflammable products.

For your own safety and for correct machine operation, only use original manufacturer parts.

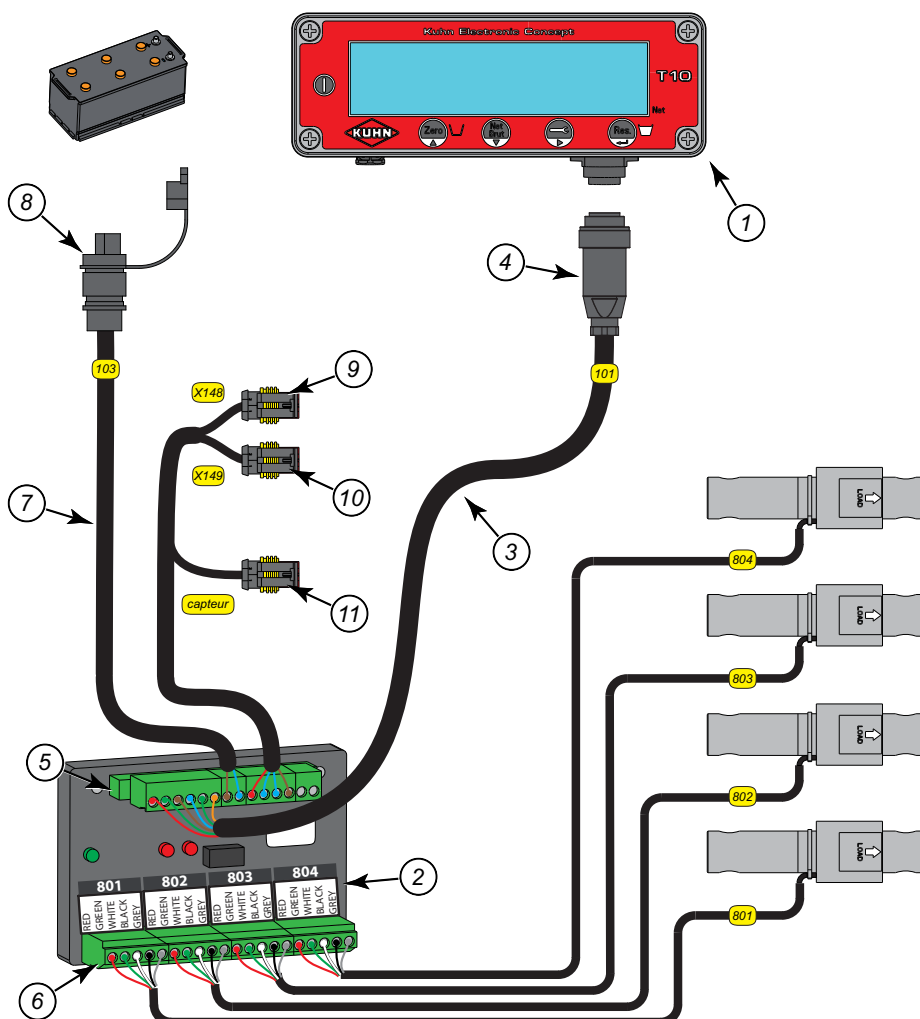




Weighing system characteristics

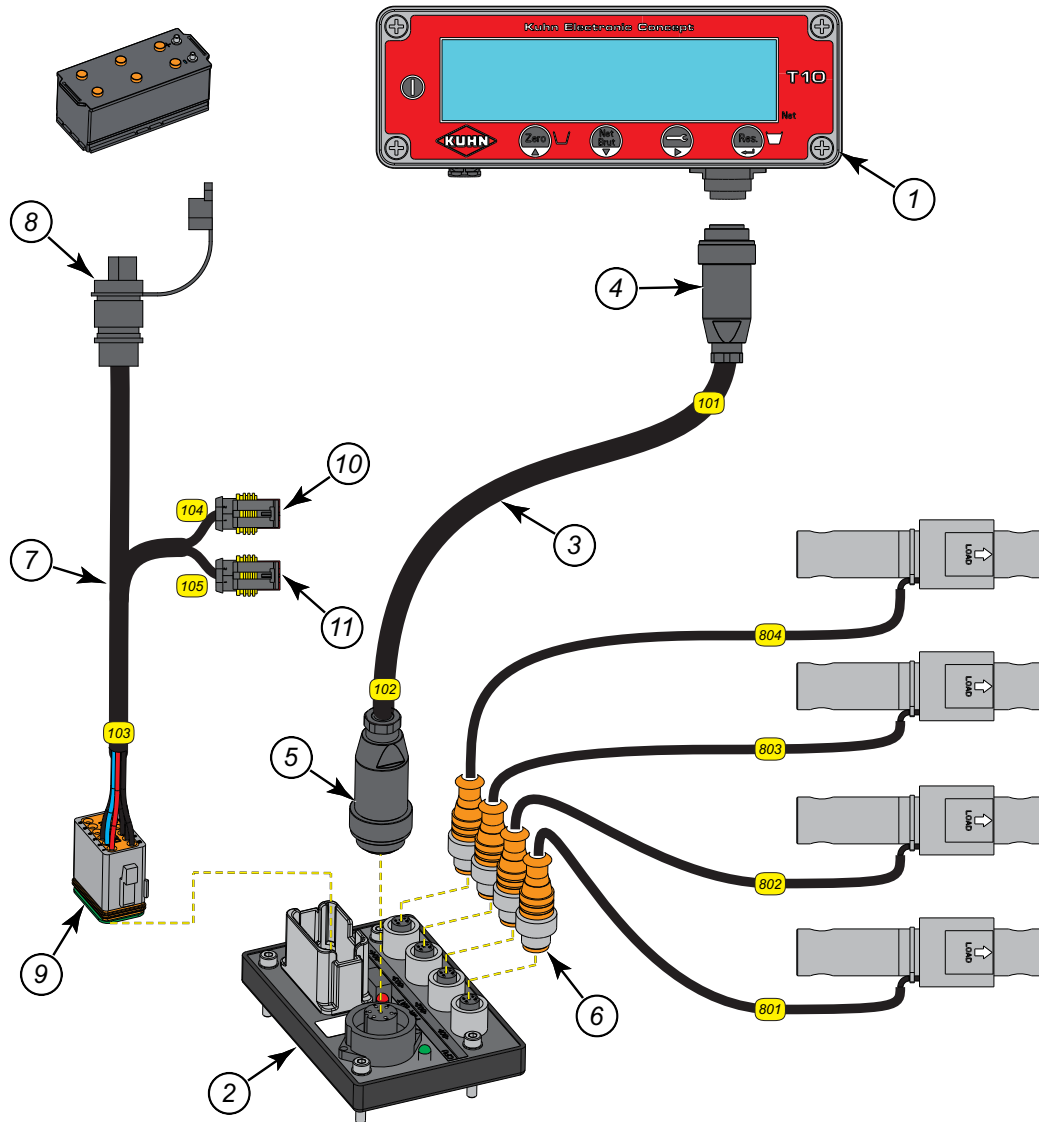
1. Description and glossary

Connection diagram: Module M12



- | | |
|--|--|
| 1 : Terminal T10 | 2 : Module M12 |
| 3 : CAN wiring harness | 4 : 7-pin female connector (No.101) |
| 5 : Screw terminal strip: CAN network / Supply / Sensor outputs | 6 : Screw terminal strip: Weight sensor (No.801 / 802 / 803 / 804) |
| 7 : Power supply harness | 8 : 3 pin plug (No 103) |
| 9 : Not used (No X148) | 10 : Not used (No X149) |
| 11 : Indicator light connector (Only on bedding machines) (Sensor no.) | |

Connection diagram: Module M13



- | | |
|---|---|
| 1 : Terminal T10 | 2 : Module M13 |
| 3 : CAN wiring harness | 4 : 7-pin female connector (No.101) |
| 5 : 7-pin male connector (No.102) | 6 : Load cell connectors (No.801 / 802 / 803 / 804) |
| 7 : Power supply harness | 8 : 3 pin plug |
| 9 : 12-pin female connector (No.103) | 10 : Not used (No 104) |
| 11 : Connector for 105 light indicator (Only on bedding machines) | |

2. Technical specifications

■ Terminal T10

- Weight display
- Weighing system controls
 - 5 displays, 7 multiplexed segments and decimal point
 - Voltage input: 12 V (10 V to 16 V)
 - Operating temperature: - 20°C to + 60°C
 - Sealed shockproof plastic box IP65 with transparent cover
 - Keyboard with 4 function buttons and 1 On/Off button

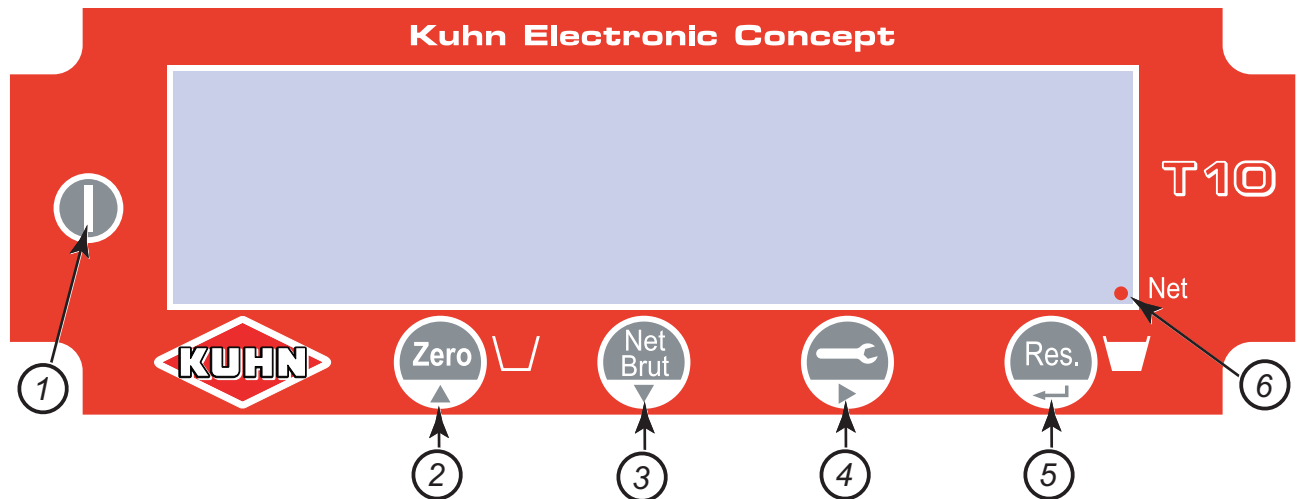
■ Module M12 / M13

- Signal processing
- Backup of calibration values
 - Voltage input: 12 V (10 V to 16 V)

■ CAN wiring harness

- Connects module M12 / M13 to terminal T10.
-

3. Description of the controls



1 key:

- On / Off

2 key:

- Setting to zero of the tare at the start (machine empty)
- Incrementation of the figures

3 key:

- Net/Gross
- Decrementation of the figures

4 key:

- Access to the maintenance menu
- Scrolling of the cursor
- Setting the weighing unit display speed

5 key:

- Display of the weighing value at the start (machine full)
- Display resolution
- Validation button

Indicator 6:

- NET weighing mode activated

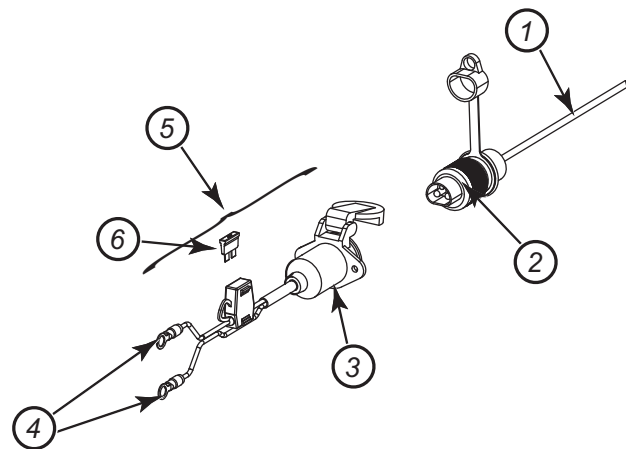
4. Electrical connection

- The weighing system is delivered with a full supply wiring harness:
 - A wiring harness (1) pre-assembled on the box with a male connector.
 - A wiring harness (5) tractor side with a fuse and female connector.
- Have your Kuhn dealer connect the wiring harness tractor side to the tractor battery terminals + (brown) and - (blue).
- It is possible to have a second supply cable for another tractor under the reference A7040064.
- For a regular and constant electricity supply for the machines' controls, connect the electricity power cable directly to the battery.



Some tractors are factory equipped with a 3-pin socket, to prevent any malfunction, check the polarity of this socket before connecting the control box.

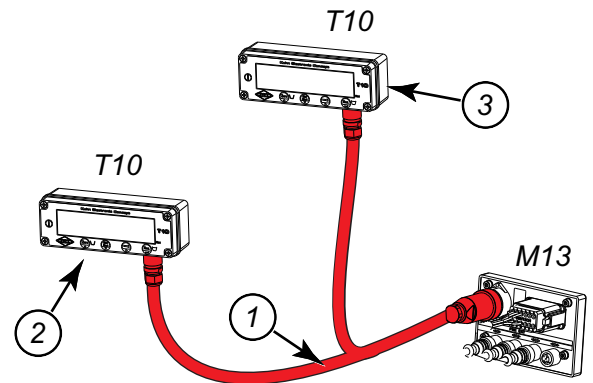
- During the assembly of the electricity supply cable, avoid the risk of cutting or burns with the exhaust pipe.
- Connect the male plug (2) to the female socket (3) to supply the control and weighing boxes.
- The wiring harness tractor side is equipped with a fuse (6) of 15 A.
- The weighing box is now supplied.
- You can disconnect the supply to the box at any time, without having to disassemble all the cable (5) which stays permanently on the tractor.



■ **Connection diagram with display reminder T10**

(Optional equipment)

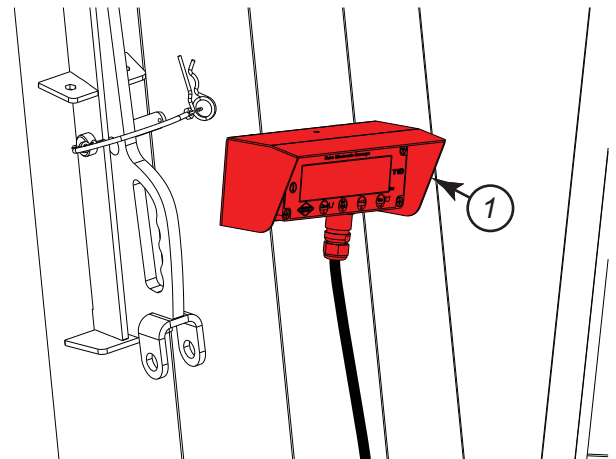
- Connect the cable (1) to terminals T10 (2) and T10 (3) and to module M13.



- Place the display reminder (1) where you want it on the machine.



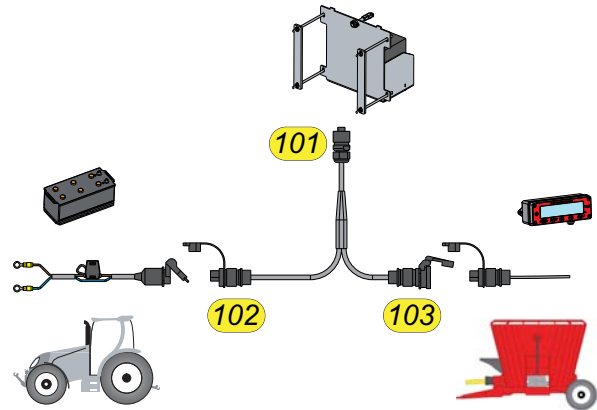
**Respect wiring harness path points:
Make sure to avoid friction or crushing areas
when installing the power cable.**



■ Wiring diagram with battery

Optional equipment

- Plug connector (101) into the "battery" equipment harness connector.
- Plug connector (102) into the tractor 3-pin socket.
- Plug connector (103) into the T10 weighing unit supply harness.



Respect wiring harness path points:
Make sure to avoid friction or crushing areas
when installing the power cable.

Operating conditions

1. All machines

When you start, before pressing zero, make sure that:

- The machine is in the horizontal position.
- The machine is not exposed to violent winds.
- The transmission slides effortlessly.
- All the components of the machine (arm, hook, board etc.) are in the rest position.

2. Machine with chassis

- Type of machines concerned:
 - EUROMIX I, II and III
- To put the machine horizontal:
 - Adjust the drawbar (See the instructions for the machine)
 - Make sure that the chassis is completely apart from the body (product or foreign bodies).

3. Machines without chassis

- Type of machines concerned:
 - ALTOR 4560M, 5070M, 6070M, 7560H
 - ATHENOR 6070M, 7560H
 - PRIMOR 5570M
 - PROFILE

To put the machine horizontal:

- On the PRIMOR 5570M and PROFILE:
 - Adjust the drawbar (See the instructions for the machine)
- On the ALTOR 4560M .5070M. 6070M. 7560H and ATHENOR 6070M. 7560H:
 - A green indicator, situated next to the T10 indicator, lights up when the axle is correctly positioned for weighing.

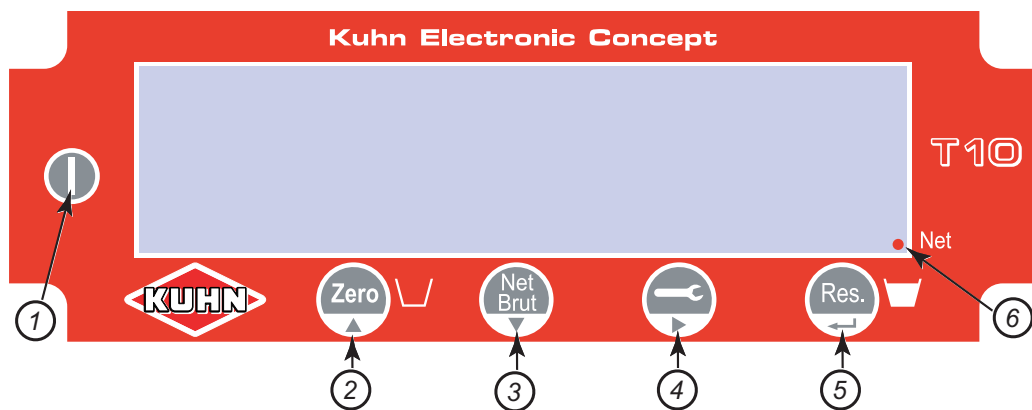


In all cases: do not activate the brakes of the machine.

Any static rubbing can distort the weighing.

Functioning

1. Power on



- Start up the module T10 by pressing on the button (1).
 - The message 'START' is displayed (Checking of the communication M12 / M13 / T10)
 - The message 'TEST' flashes (Sensor testing).
 - The message '--0--' flashes.

First case: The machine is empty

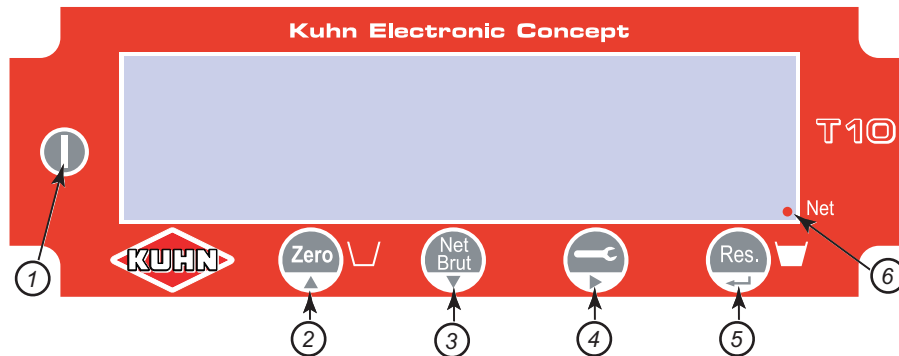
- Press on the button (2).
- If there is more than 100 kg (220.5 Lb) of product left in the machine, the message 'SURE' is displayed.
- Press again on the button (2) to confirm.

Second case: The machine is already loaded

- Press on the button (5).



If you have confirmed by pressing on the button (2) by mistake, the weighing system indicates '0'. To find the contents of the machine, carry out a resetting to zero (see the following paragraph).



2. Resetting to zero

In the case of a problem (display of a wrong value), it is possible to reset to zero at any time:

- Press on the button (4), keeping it pressed down and then press the button (2).
- The message '--0--' is displayed then the message '0' is displayed going from right to left.
- Release the two buttons.

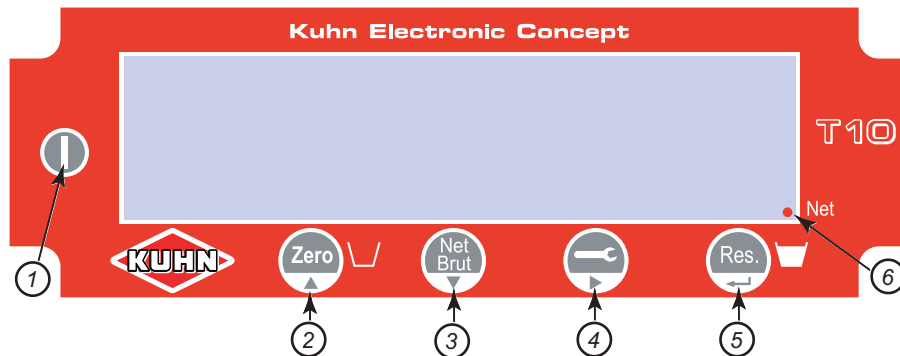


If the problem persists, call your Kuhn dealer.

3. Net/Gross weighing mode

To load a new product, you can, at any time:

- Carry out a temporary zero (Net weighing mode), press on the button (2).
- The weighing system then displays '0' and an indicator (6) shows the weighing mode.
- To go back to the total weight display, press on the button (3), keeping it pressed down, then release when the message 'Gross' appears.



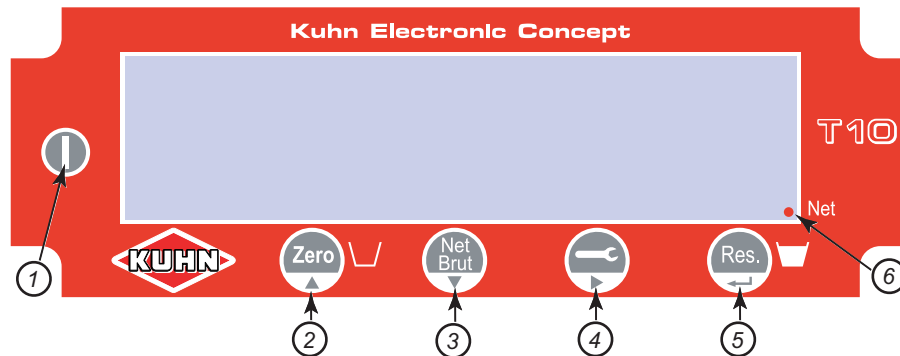
4. Setting the weighing unit display speed

The weighing unit display speed can be adjusted.

- 6 display speeds are available:
 - High speed: 6
 - Low speed: 1
- To go from one to the other:
 - Press on the button (4) and keep it pressed down.
 - Release it when the message "1.2.3.4.5" or "6" is displayed.



With version V5.0 on modules M12/M13 only.



5. Resolution

It is possible to display the weight of 1 kg in 1 kg or 5 kg in 5 kg.

- To go from one to the other:
 - Press on the button (5) and keep it pressed down.
 - Release when the message 'R=1' or 'R=5' is displayed.

6. Error messages

If the message 'BAT' is displayed:

- The supply voltage is insufficient.
- Check the electrical connections to the tractor.
- Check the supply voltage.

If the message 'CELL' is displayed:

- The indicator signals a sensor problem: Contact your KUHN dealer so that he can check:
 - The condition of the sensors.
 - Their connections.
 - The correct operation of each sensor.

Code E0050 is displayed

- Have you loaded new Software?
- This message is displayed when there is Software incompatibility.
 - Load compatible 2 software.

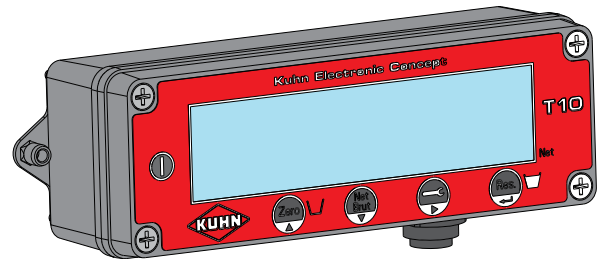
Code E0010 is displayed

- The message indicates an open circuit between T10 and M12/M13.
 - Check the electrical connection status.
 - Check wire continuity between connectors 101 et 102.
-

Optional equipment

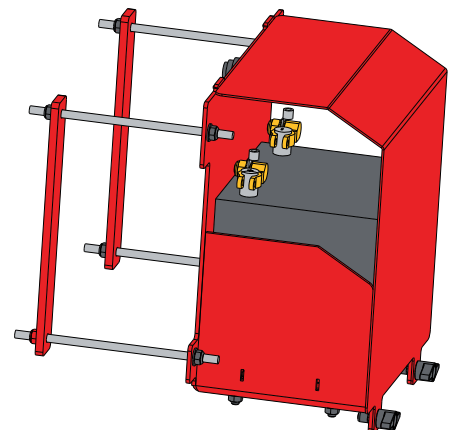
1. Remote display

Transfer the weighing unit display to a second screen.



2. Battery

Enables weighing unit operation without a tractor.



Maintenance and storage

The weighing indicator does not require any particular maintenance, in the case of a breakdown or a malfunction call your KUHN repairman.



When washing the machine, never point the water jet at the weighing indicator nor at the junction box.



Never take off the front face of the weighing indicator as you risk having your guarantee cancelled. The box comes with a tamper evident label.



For any welding operation on the machine, disconnect the electricity supply of the machine and the tractor (battery and alternator).



Position the earth as close as possible to the part to be welded. Never put it on the chassis to weld on the body or vice-versa. This could be fatal for the sensors which connect the body to the chassis.



Washing with a high-pressure cleaner is strongly advised against, as there is a risk of the water penetrating inside the indicator and the sensors.



Limited warranty

"KUHN-AUDUREAU S.A. B.P. 19, 85260 LA COPECHAGNIERE, FRANCE (hereinafter called "the Company") warrants, in accordance with the provisions below, to each original retail purchaser of new KUHN equipment of its own manufacture from an authorized KUHN dealer, that such equipment is, at the time of delivery to such purchaser, free from defects in material and workmanship, providing the machine is used and serviced in accordance with the recommendations in the Operator's manual".

This Limited Warranty covers the equipment for a period of one year starting from the date the equipment is delivered to the retail purchaser and during this period up to a limit of 500 hours of use.

The date of invoice to the retail purchaser and the registration of the machine by the dealer are taken as evidence of delivery of the machine.

This Limited Warranty covers the reimbursement (or repair) of components as well as labor charges incurred, based on the Company warranty labor rate and allowable time for repair.

■ These conditions are subject to the following exceptions:

- Parts of the machine which are not of KUHN manufacture, such as tires, PTO shafts, slip clutches, hydraulic jacks, etc. are not covered by the KUHN Limited Warranty, but are subject to the warranty of the original manufacturer.
- Warranty claims related to these types of parts must be handled in the same way as if they were parts manufactured by KUHN. However, compensation will be paid in accordance with the warranty agreement of the manufacturer concerned, in as much as the latter justifies such a claim.
- Obviously, this Warranty does not apply to failure through normal wear and tear, to damage resulting from negligence or to faulty surveillance, to wrong use, to lack of maintenance and/or if the machine has been involved in an accident, lent out or used for purposes other than which it was intended by the Company.
- This Limited Warranty will not apply to any product that is altered or modified in any way without the express permission of the Company, or if parts not made by Kuhn are used on a machine sold by the Company and/or if repairs have been carried out by anyone other than Authorized Service Dealers.
- The Company shall not be responsible for any damage to the machine or its equipment in transit or handling by any common carrier, within or without the Warranty period.
- The Company cannot be held responsible for any claims or accidents to the owner or to any third party, nor to any resulting responsibility.
- In the same way, the Company cannot be held responsible for paying an indemnity for whatever reason in the case of loss of anticipated profits or of any prejudice due to a failing, a hidden fault or breakdown of the machine.

■ The customer will be responsible for and bear the costs of:

- Normal maintenance of the material, i.e. greasing, maintenance of oil levels, minor adjustments, etc.
- Labor charges due to removing and replacing the faulty part(s) or, as applicable, the adjustment of the new replacement part(s).
- Dealer travel time, or traveling costs to and from the machine.
- Transporting machines, equipment or parts to the repair site and returning them to the user site.
- Parts defined as normal wearing items, such as belts, blades, forks, disks, knives, spades, tines, slip clutches, etc. that are not covered by the Warranty.

■ **The Limited Warranty is dependent on the strict observance of the following conditions:**

- The material must be put in service by the dealer according to our instructions.
- The machine has been registered on line via extranet - www.kuhn.com or the warranty/product registration form has been completed and returned to the address indicated on the form as soon as the machine has been delivered to the retail purchaser.
- The warranty claim is completed on line via extranet - www.kuhn.com or submitted on a KUHN warranty claim form and returned to the Company within one month after the date of failure or the date of problem becoming apparent.
- The claim must be completed by the dealer and following information must be mentioned:
 - **Dealer's name, address and code number**
 - **Name and address of purchaser**
 - **Exact type of machine**
 - **Machine serial number**
 - **Date of delivery to the purchaser**
 - **Date of the incident**
 - **Number of hours or area (hectares, acres) of use**
 - **Power of tractor used**
 - **Detailed description and presumed cause of the incident**
 - **Quantity, reference number and name of the damaged parts**
 - **Invoice number and date for replacement parts.**
- The dealer should send the damaged parts to the Company address for survey report along with a copy of the Warranty/claims form. Transport costs for the return of said parts are borne by the sender.
- The machine must be used and maintained according to the instructions in the operator's manual. The quality and quantity of lubricants used must always be in accordance with Company regulations.
- The safety measures set out in the Operator's manual and on the machine itself must be followed, and all the guards and protective elements, of whatever nature, must be inspected regularly and maintained in perfect working order.
- The judgment of the Company in all case of claims under this Limited Warranty shall be final and conclusive and the purchaser agrees to accept its decisions.
- If the Warranty is refused, the dealer is allowed a period of 15 days from the date of receiving our letter to request the return of the damaged parts.

■ **Further conditions: limits of application and responsibility**

- This Limited Warranty shall not be assigned or transferred to anyone unless the written consent of the Company has first been obtained.
- Persons dealing in the Company's products have no right or authority to assume any obligation or take any decision on their behalf, whether expressly or tacitly.
- Technical assistance given by the Company or its agents for repairing or operating material does not lead to any responsibility on their behalf and cannot under any circumstances bring novation or derogation to the conditions of the present Limited Warranty.
- The Company reserves the right to change its machines without prior notice and without being obliged to apply these changes to machines that are already sold or in service.
- Moreover, because of the constant progress in technology, no guarantee is given to the descriptions of equipment published in any document by the Company.
- The present Limited Warranty excludes any other responsibility, whether legal or conventional, express or implied, and there are no warranties extending beyond those defined herein.



www.kuhn.com

KUHN S.A. B.P. 50060 F - 67706 SAVERNE CEDEX (FRANCE)

Tél. : + 33 (0) 3 88 01 81 00 - Fax : + 33 (0) 3 88 01 81 01

Société Anonyme au Capital de 19 488 000 Euros

KUHN-AUDUREAU S.A. B.P. 19 F - 85260 LA COPECHAGNIERE (FRANCE)

Tél. : + 33 (0) 2 51 41 47 00 - Fax : + 33 (0) 2 51 41 41 03

Société Anonyme au Capital de 2 530 000 Euros

KUHN-BLANCHARD SAS - 24, route de Nantes - F - 44680 CHEMERE (FRANCE)

Tél. : + 33 (0) 2 40 21 30 24 - Fax : + 33 (0) 2 40 64 80 11

Société par Action Simplifiée au Capital de 2 000 000 Euros

KUHN-HUARD S.A. B.P. 49 F - 44142 CHATEAUBRIANT CEDEX (FRANCE)

Tél. : + 33 (0) 2 40 55 77 00 - Fax : + 33 (0) 2 40 55 77 10

Société Anonyme au Capital de 4 800 000 Euros

KUHN-GELDROP B.V. - P.O. Box 9 - 5660 AA GELDROP (THE NETHERLANDS)

Tél. : + 31 (0) 40 289 33 00 - Fax : + 31 (0) 40 285 78 95

KUHN NORTH AMERICA INC P.O. Box 167 Brodhead - Wisconsin 53520 (USA)

Tél. : +1 (608) 897 - 2131 - Fax : (608) 897 - 2561

KUHN DO BRASIL S/A PASSO FUNDO - RS - 99050-130 (BRASIL)

Tél. : + 55 (54) 3316 6200 - Fax : + 55 (54) 3316 6250