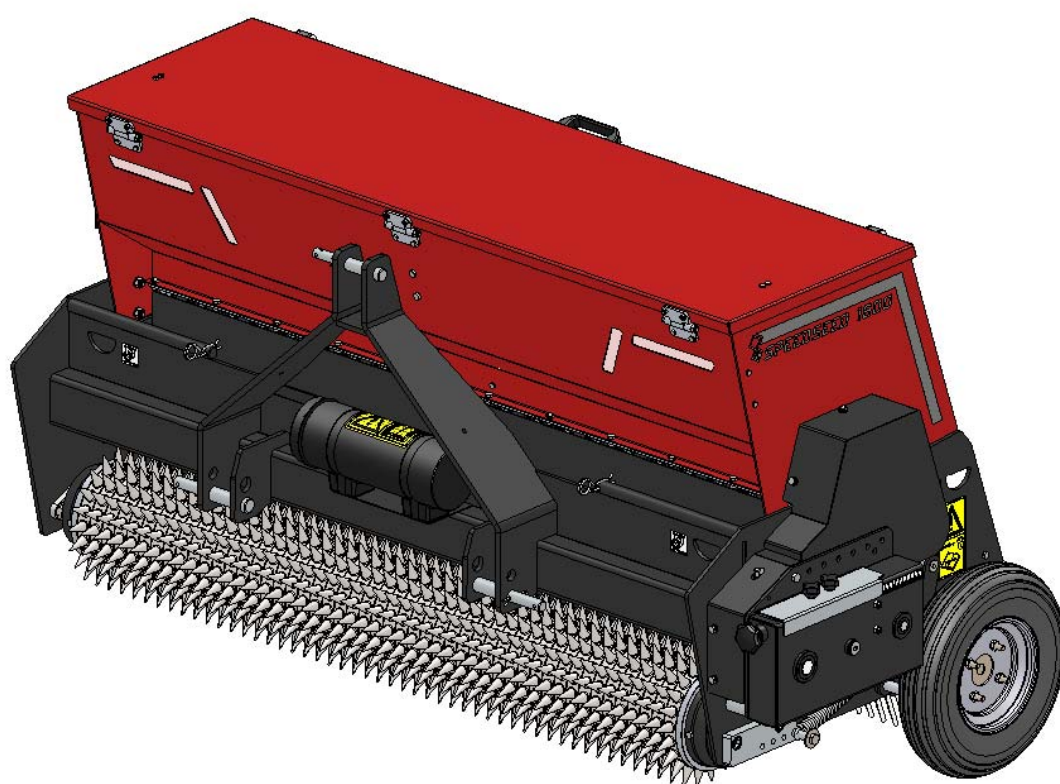


User Manual and Parts book



SPEEDSEED 1100-1500-2000-2300



2046 English 924.120.202

Translation of the original User Manual

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EU DECLARATION

We – **Redexim BV, Utrechtseweg 127, 3702 AC Zeist, Holland** – declare entirely under our own responsibility that the product:

SPEEDSEED WITH A MACHINE NUMBER AS INDICATED ON THE MACHINE AND INDICATED IN THIS MANUAL

to which this declaration refers, complies with stipulation of the 2006/42/EC machine directive and with the norms NEN-EN-ISO 12100:2010, NEN-EN-ISO 13857:2008.

Zeist, 09.11.18

A handwritten signature in blue ink, appearing to be 'A.C. Bos', written over a light blue rectangular background.

A.C. Bos
Manager Operations & Logistics
Redexim Holland

FOREWORD

Congratulations on your Speedseed purchase. For safe and long-lasting operation of this machine, it is necessary to read and to understand this user manual. It is impossible to work safely with this machine *without* complete knowledge of the content of the user manual.

This machine does *not* operate independently! It is the user's responsibility to use the correct tractor or other towing vehicle. The user should check the combination of the towing vehicle and the machine with regard to various aspects, such as noise level and safety risks. In addition, the user should comply with the user instructions of the vehicle and spare parts that are used.

All information and technical specifications provided at the moment that this document is published are the most recent ones. Design specifications may be changed without prior notice.

You can contact your sales point or dealer if you have questions and/or if there are ambiguities in this manual or about the machine concerned.

This document is a translation of the original user manual. Upon request, the original user manual is available in Dutch.

WARRANTY CONDITIONS

AT THE TIME OF DELIVERY THIS MACHINE IS GUARANTEED AGAINST MATERIAL DEFECTS.

THIS WARRANTY IS VALID FOR A PERIOD OF 12 MONTHS FROM THE PURCHASE DATE.

REDEXIM WARRANTIES ARE SUBJECT TO THE 'GENERAL CONDITIONS FOR SUPPLY OF PLANT AND MACHINERY FOR EXPORT, NUMBER 188' THAT ARE PUBLISHED UNDER THE AUSPICES OF THE UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE.

REGISTRATION CARD

For your own information, fill in the table below:

Serial number of the machine	
Dealer name	
Date of purchase	
Remarks	

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1. SAFETY INSTRUCTIONS


This machine is designed for safe use. This can only be achieved if you completely follow the safety instructions described in this manual.

Read and understand the manual *before* you start using this machine.

If the machine is not used as described in this manual, this can result in injuries and/or damage to the machine.

This user manual lists instructions that are numbered in sequence. You should follow this sequence. A



is an indication of a safety instruction. A  means a tip and/or note.

1.1. Obligations of the user

Treating fields/lawns is the only purpose of the machine. Any other use is improper. The manufacturer will not accept any liability for damage resulting from improper use. All risks occurring with this are entirely at the expense of the user.

All persons assigned to operate, maintain and repair the **machine** by the owner must completely read and understand the operation manual and in particular the chapter of **Safety Instructions**.

Modifications to the machine that have a negative impact on the safety must be rectified immediately.

The user is obliged to check the machine for visible damage and defects before using the machine.

For safety reasons it is not permitted to make changes or adjustments to the machine (except those approved by the manufacturer). If modifications to the machine have been made, then the current CE marking is cancelled. The person that has made these modifications has to apply for a new CE marking himself.

Following the use, maintenance and repair instructions prescribed by the manufacturer is also considered proper use of this machine.

The user is responsible for the safe combination of the machine and the towing vehicle, which comply with the requirements as described in the Technical Data (**see Chapter 2**). **This entire combination should be tested** for noise, safety, risk and user friendliness. User instructions should also be drafted.

Dress appropriately during work activities with the machine. Wear sturdy shoes with steel toecaps, long trousers and tie up long hair. Do not wear loose clothing.

The general applicable health & safety (Dutch: ARBO) regulations must also be followed in addition to the instructions in this user manual.

Relevant traffic regulations also apply in case of using public roads.

1.2. Maintenance, repairs and adjustments

Keep a record of the repair activities.

When unskilled people use, maintain or repair the machine, this could result in injuries to the user *and* to third parties. **This should be avoided!**

Use only original **Redexim** parts for maintenance or repairs because of the safety of the machine *and* of the user.

Only authorised technical personnel may carry out repairs to the machine.

When carrying out maintenance, adjustments and repairs, it is necessary to block the machine in order to prevent it from sinking away, driving off and/or sliding off.

If a hydraulic installation is present, you should **always** make it pressure-free *before* working on this installation.

Used oil/grease is harmful to the environment. Dispose of these substances according to the regulations that apply in your location.

1.3. Using the machine

Attach the machine to the towing vehicle according to the regulations. Pay close attention to the risk of injury!

Never use the machine in the absence of protective guards and safety stickers.

Check the machine for loose bolts, nuts and components *before every operation.*

Check whether you have a clear field of vision – both close by and far away – *before* you start moving.

All persons that are going to operate the machine must be familiar with all the functions and control elements of the machine *before* starting any work activities.

Never crawl under the machine! If necessary, tip over the machine to work at the bottom side.

If present, check the hydraulic hoses regularly and replace these when the hydraulic hoses are damaged or appear old.

2. TECHNICAL DATA

Type	Speedseed 1100	Speedseed 1500
Recommended vehicle	20 pk with a minimum lifting capacity of 450 kg (990 lbs) measured 610 mm behind the lifting eyes	30 pk with a minimum lifting capacity of 550 kg (1212 lbs) measured 610 mm behind the lifting eyes
Working width	1.1 m. (43.3")	1.5 m. (59")
Working depth	5 – 20 mm (0.19" – 0.78")	5 – 20 mm (0.19" – 0.78")
Sowing speed	Max. 12 km/h (7.5 mph)	Max. 12 km/h (7.5 mph)
Sow hole distance	Square 30 mm (1.18")	Square 30 mm (1.18")
Number of holes per m ² using a single spiked roller	990	990
Weight	380 kg (836 lbs)	468 kg (1030 lbs)
Dimensions (L x W x H)	0.88 x 1.52 x 1.02 m. (34.8" x 60.1" x 40.1")	0.88 x 1.91 x 1.02 m. (34.8" x 75.5" x 40.1")
Three-point system	Cat. 1-2	Cat. 1-2
Bearing grease to be used	EP 2	EP 2
Content of the sand bin	169 l.(5.9 cu.ft.)	224 l.(7.84 cu. Ft.)
Tyre pressure	1 – 2 bar (14.5 – 29 Psi)	1 – 2 bar (14.5 – 29 Psi)
Optional	<ul style="list-style-type: none"> - Rear roller with spikes - Brush scraper - Digital counter - Crush roller - Set of weights - Set of wheels 	<ul style="list-style-type: none"> - Rear roller with spikes - Brush scraper - Digital counter - Crush roller - Set of weights - Set of wheels

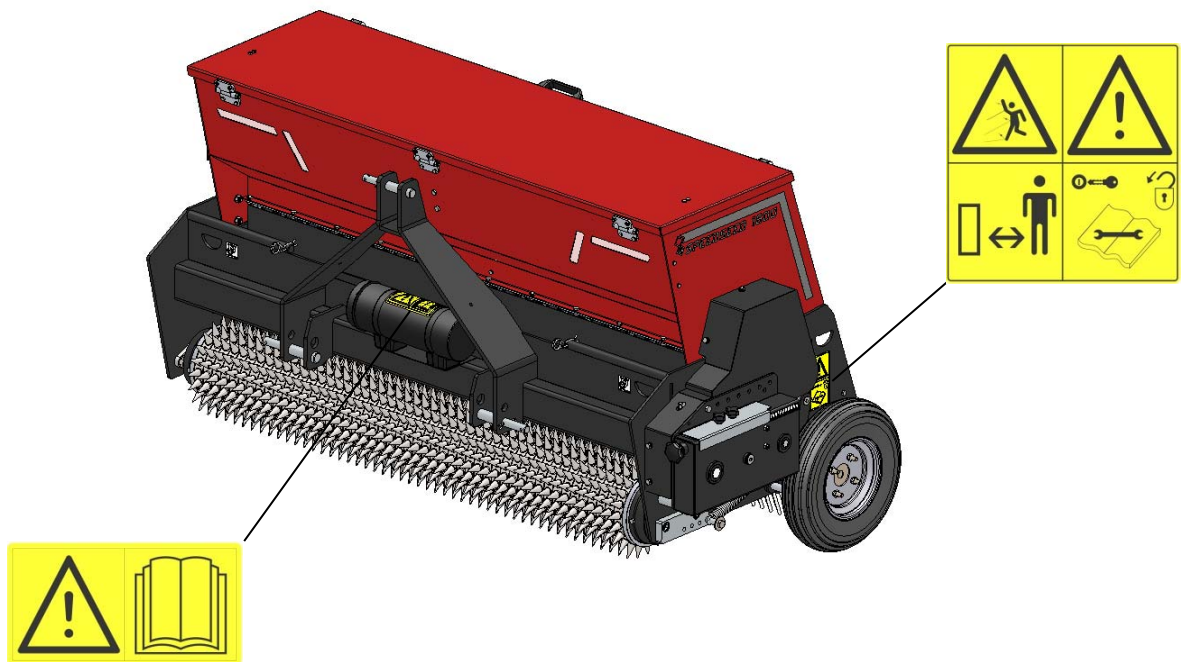
Type	Speedseed 2000	Speedseed 2300
Recommended vehicle	40 pk with a minimum lifting capacity of 595 kg (1310 lbs) measured 610 mm behind the lifting eyes	40 pk with a minimum lifting capacity of 650 kg (1430 lbs) measured 610 mm behind the lifting eyes
Working width	2.0 m. (78.7")	2.3 m. (90.6")
Working depth	5 – 20 mm (0.19" – 0.78")	5 – 20 mm (0.19" – 0.78")
Sowing speed	Max. 12 km/h (7.5 mph)	Max. 12 km/h (7.5 mph)
Sow hole distance	Square 30 mm (1.18")	Square 30 mm (1.18")
Number of holes per m ² using a single spiked roller	990	990
Weight	591 kg (1300 lbs)	650 kg (1430 lbs)
Dimensions (L x W x H)	0.88 x 2.44 x 1.02 m. (34.8" x 96.1" x 40.1")	0.88 x 2.72 x 1.02 m. (34.8" x 107.4" x 40.1")
Three-point system	Cat. 1-2	Cat. 1-2
Bearing grease to be used	EP 2	EP 2
Content of the sand bin	297 l.(10.4 cu.ft.)	337 l.(11.8 cu. Ft.)
Tyre pressure	1 – 2 bar (14.5 – 29 Psi)	1 – 2 bar (14.5 – 29 Psi)
Optional	<ul style="list-style-type: none"> - Rear roller with spikes - Brush scraper - Digital counter - Crush roller - Set of weights - Set of wheels 	<ul style="list-style-type: none"> - Rear roller with spikes - Brush scraper - Digital counter - Crush roller - Set of weights - Set of wheels



3. GENERAL DESCRIPTION

The Speedseed is a machine for sowing grass areas.

4. SAFETY STICKERS

Safety stickers are located on both sides of the machine. These safety stickers must always be clearly visible and legible and must be replaced if they have become damaged.



 <p>933.280.402</p>	<ul style="list-style-type: none"> - In case of maintenance, adjustments and repair, always switch OFF the engine of the towing vehicle. - Keep a distance of minimum 4 metres if the machine is operating (except the operator).
 <p>900.280.402</p>	<ul style="list-style-type: none"> - Prior to using the machine, the operators of the machine must read the user manual carefully.

5. FIRST INSTALLATION

The machine should be prepared for use as follows (**Figure 1**):

1. Attach cables to the hoisting points (**1**).



Ensure that the crane and hoisting cable can handle at least the following weights:

Speedseed 1100	500 kg (1100 lbs)
Speedseed 1500	650 kg (1430 lbs)
Speedseed 2000	700 kg (1540 lbs)
Speedseed 2300	850 kg (1870 lbs)

2. Lift the machine including the pallet approx. 10 cm (4") off the ground.
3. Loosen the pallet by removing the 3-point pins at the bottom (**2**).
4. Pull the pallet from under the machine.
5. Carefully lower the machine until it stands safely on the ground.



!! KEEP A SAFE DISTANCE. THE MACHINE MAY START TO SLIDE DURING HOISTING !!



!! NEVER CRAWL UNDER THE MACHINE !!

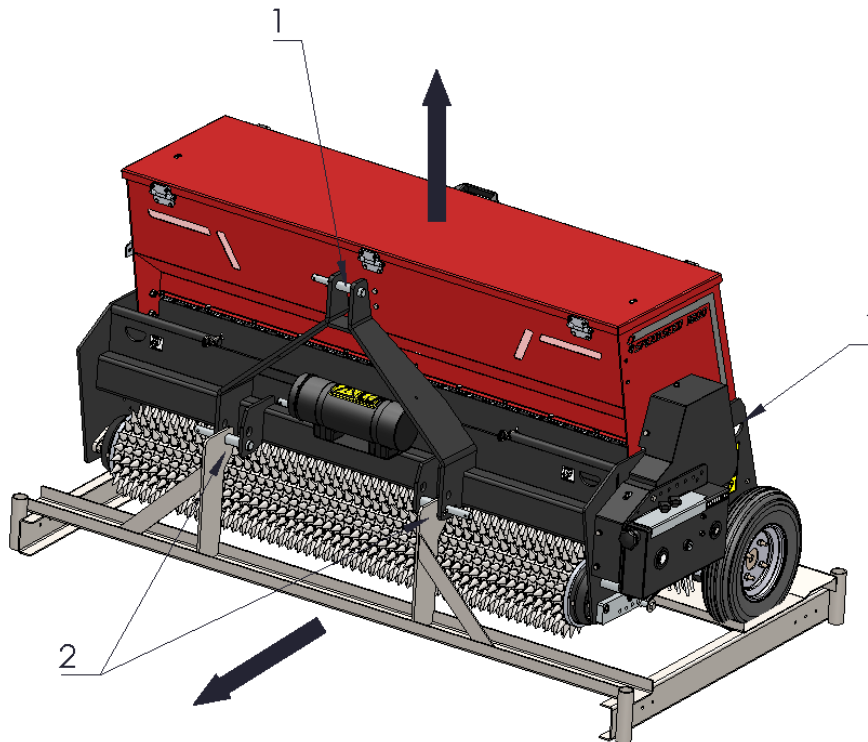


Figure 1

6. ATTACHING AND DETACHING THE MACHINE

Attaching and detaching the machine has to be done carefully. Follow the instructions below:

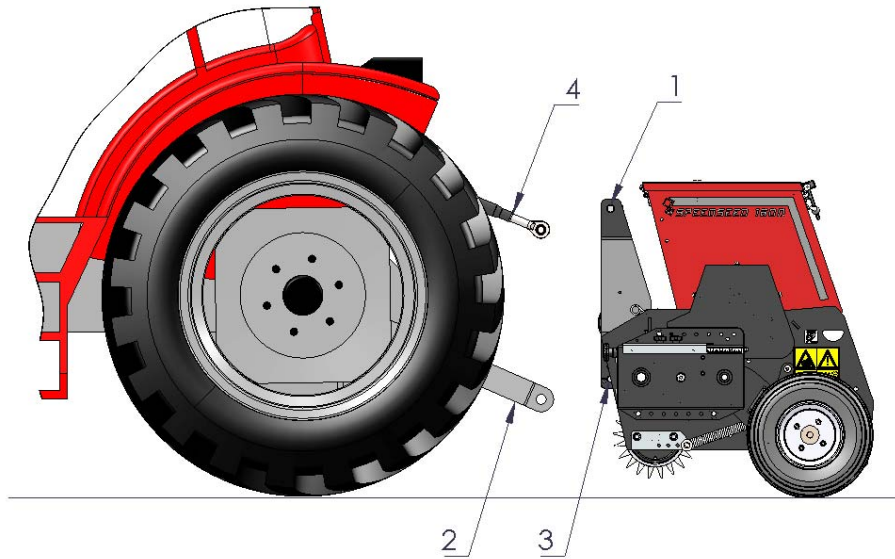


Figure 2

6.1. Attaching the machine

Prior to attaching the machine, check the following points:

- Check whether the machine is undamaged and whether it is safe to attach and use the machine.
- Check whether the bolts and nuts are tightened with the correct torque.
- Check whether all safety stickers are on the machine and whether these are undamaged and easily readable. **Never** use the machine if it has damaged or unreadable stickers.

The machine should be attached to the tractor in the following manner:

1. Remove **the 3-point pins (1) at the top** from the machine (**see Figure 2**).
2. Carefully drive the tractor backwards until the lifting arms **(2)** can be attached to the machine.



!! Make sure that the tractor and the machine cannot move while you are attaching them !!



!! Switch off the tractor engine *before* attaching the machine !!

3. Attach the lifting arms **(2)** to the machine using the 3-point pins **(3)**. Lock the pins using the R-clips.
4. Set the stabilizer to a sideways stroke of 100 mm.
5. Mount the top rod **(4)** onto the tractor and attach it to the machine.
6. Adjust the top rod in such a manner that the machine is horizontal.



!! Make sure that the 3-point pins are locked using the R-clips !!

7. Start the tractor and lift the machine off the ground.

6.2. Detaching the machine

The machine should be detached in the following manner (see **Figure 2**):

1. Place the tractor and the machine on a flat surface.



!! Make sure that the machine and the tractor cannot move while you are detaching them !!



!! Switch off the tractor engine *before* detaching the machine !!

2. Carefully place the machine on the ground.
3. Loosen the top rod (**4**) and remove it.
4. Loosen the lowest arms (**2**).



!! The ground must be flat !!



!! First, you will have to remove additional weight !!

5. Start the tractor and drive off.

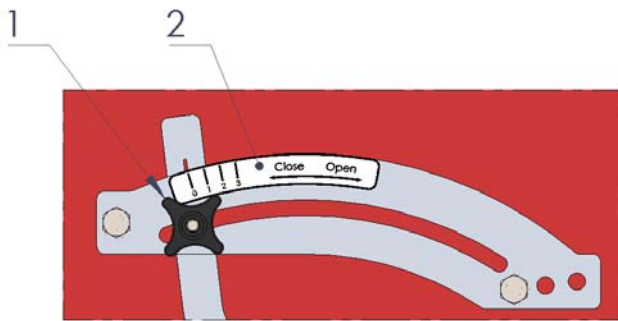
7. MACHINE SETTINGS

The Speedseed has several options for setting the machine optimally.

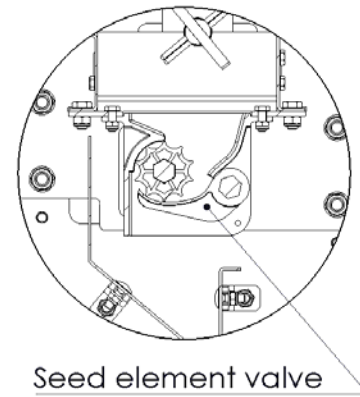
7.1. Setting the seed-element valves

The machine is suitable for sowing different types of seeds. Furthermore, the Speedseed can also be used in combination with various tractors and you can sow at different speeds. To adjust the machine to the various factors, the machine's sowing installation must be adjusted. The sowing elements have a number of functions (see **Figure 3b**):

1. If the valve is closed, no seeds can flow out of the hopper when the machine is idle (e.g., during transport).
2. To empty the hopper after sowing, the sowing-element valve can be opened so that the seeds can run out of the hopper.
3. The valve can be adjusted according to the size of the seeds that will be sown. In case of fine grass seed, the element valve must be closed completely. Then the gear wheel grabs the seeds. In the case of larger seeds, the space between the gear wheel and the valve is not large enough to let the seeds pass. Therefore, the valve needs to be opened more for larger seeds. Adjusting the size of the opening can be done using the valve adjustment handle. The handle can be adjusted by loosening the stellar knob (**1**), selecting the required position by means of the indication sticker (**2**), and retightening the stellar knob (see **Figure 3a**).



Figuur 3a



Figuur 3b

7.2. Setting the quantity of seeds using the gearbox

By affecting the setting of the sowing elements, the delivery of seeds can be set to additional or fewer seeds. Each sowing element contains a rotor that transports the seeds. By affecting the speed of the gears, the quantity of seeds can be adjusted. The gearbox can adjust the speed continuously-variable. Do the following to adjust the quantity of the seeds:

1. Loosen the stellar knobs (1) (see Figure 4).
2. Rotate the stellar knob (2) to change the settings. You can see the settings on the sticker (3).
3. Retighten the stellar knobs (1).

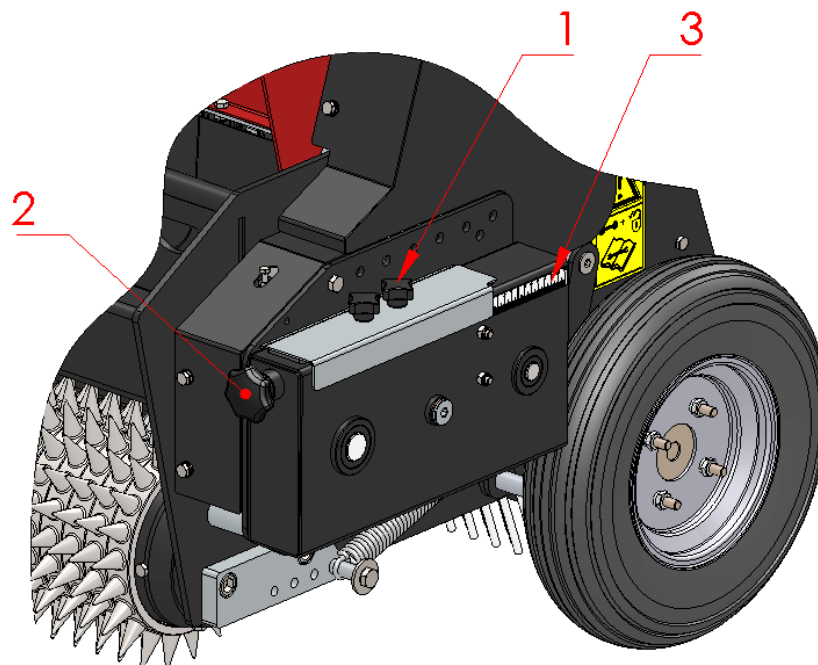


Figure 4

If the gearbox is in the maximum position and there are still not enough seeds coming out of the machine, the seed-element valves need to be readjusted.

7.3. Turning test

The quantity of seeds should be adjusted for the correct operation of the Overseeder 3D. See the Tables 1, 2 and 3 for an indication of the required quantity.

You should consider the following instructions for this:

!! Make sure that the Overseeder 3D is standing on its legs and is detached from the tractor (see Section 6.2) !!

You will need the following accessories for adjusting the quantity of seeds:

1. A scale
2. A tray for weighing the seeds
3. Enough seeds for filling the hopper for minimum 30%

The procedure is as follows (see **Figure 6**):

1. Set the flap of the seed-element valves **(4)** to 0.
2. Fill the hopper with seeds and make sure that these are evenly spread throughout the hopper.
3. Loosen the stellar knob **(1)** and slide the seed dispensing bin **(2)** out of the machine.
4. Rotate the seed dispensing bin 90° and slide it back into the machine.
5. Turn the wheel **(3)** 13 rotations counter-clockwise.
6. Remove the seed dispensing bin **(2)** out of the machine and collect the seed in a tray.
7. Weigh the seeds in:

Kilograms and multiply the result by:	Pounds and multiply the result by:
Overseeder 3D 1275: 513	Overseeder 3D 1275: 4.76
Overseeder 3D 1575/1575LV: 391	Overseeder 3D 1575/1575LV: 3.63
Overseeder 3D 2075: 297	Overseeder 3D 2075: 2.76
The result is the amount of seeds in kilograms that should be spread per hectare.	The result will give the amount of pounds seeded per 1000 sq.ft. For a result in pounds/acre multiply the result with factor 43.56.

!! Attention !! If the gearbox is set on a high output, it may cause the release of a large quantity of seeds. Then divide the 13 rotations in several smaller steps!

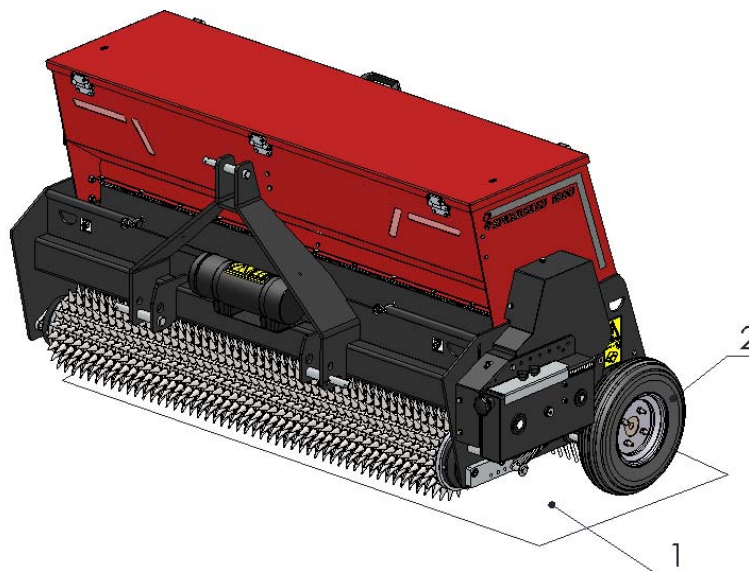


Figure 5

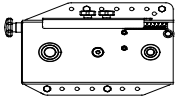
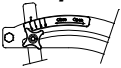
Sowing table			
Gearbox setting 	Gate opening 	Ryegrass	
		Kg/ha	Pound/Acre
0	0	0	0
1	0	12,7	11,4
2	0	39,8	35,5
3	0	67,6	60,3
4	0	100,2	89,4
5	0	131,1	117,0
6	0	167,7	149,6
7	0	209,1	186,6
8	0	257,5	229,7
9	0	315,6	281,6
10	0	376,6	336,0
11	0	476,7	425,3

Table 1

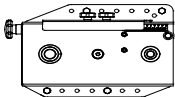

Sowing table			
Gearbox setting 	Gate opening 	Bluegrass	
		Kg/ha	Pound/Acre
0	0	0	0
1	0	18,7	16,7
2	0	79,5	70,9
3	0	121,0	108,0
4	0	172,4	153,8
5	0	235,5	210,1
6	0	301,2	268,7
7	0	376,9	336,3
8	0	482,6	430,6
9	0	578,7	516,3
10	0	680,8	607,4
11	0	873,9	779,7

Table 2

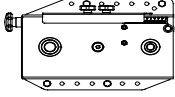

Sowing table			
Gearbox setting 	Gate opening 	Red Fescue grass	
		Kg/ha	Pound/Acre
0	0	0	0
1	0	11,3	10,1
2	0	36,2	32,3
3	0	62,7	56,0
4	0	87,3	77,9
5	0	120,9	107,8
6	0	153,2	136,7
7	0	190,1	169,6
8	0	236,7	211,2
9	0	287,3	256,3
10	0	353,3	315,2
11	0	437,3	390,1

Table 3

8. TRANSPORT

The user is responsible for transporting the Speedseed in back of the tractor on public roads. Verify the national legislation regarding the regulations. On open fields while the machine is raised, the maximum permitted speed is 20 km/h (12.4 mph) due to the weight of the Speedseed. A higher speed can be dangerous for the driver and/or the public and can even damage the machine.



!! When the machine is raised off the ground, the front axle of the tractor has to support minimum 20% of the tractor's weight !!

9. START/STOP PROCEDURE

9.1. Safety

Before using the Speedseed, you should check the following:

1. Are there loose objects in the field? First remove these objects.
2. Are there slopes? The maximum slope is 20 degrees for this machine. Always go from top to bottom.
3. Are there hard objects in the ground? If so, use the Speedseed at adjusted speed.
4. Is there danger of flying objects (e.g., golf balls) that distract the attention of the driver? If so, the Speedseed **CANNOT** be used.
5. Is there danger of sinking/sliding away? If so, postpone sowing.
6. If the soil is frozen or very wet, postpone the activities until conditions improve.
7. Check whether the hopper is not too damp. Dampness can cause the seeds to stick to each other and this leads to a poor result.
8. Do NOT make sharp curves when the Speedseed touches the ground.

A few general remarks/tips about using the Speedseed:



!! If a hard object in the ground is hit, the spikes can get damaged !!



!! NEVER drive backwards when the drive wheel is on the ground !!

9.2. Starting to sow

Prior to sowing using the machine, check the following the points:



!! Make sure that the Speedseed and the tractor cannot move while you are setting them !!



!! Switch off the tractor engine *before* descending from the tractor !!

- Check the sowing elements for damage and repair these if necessary.
- Check whether the seed outlet is not blocked.
- Check whether the machine is not damp, particularly the sowing system.
- Check whether the seeds are distributed equally; rotate the wheel once counter-clockwise.
- Check whether the drive runs smoothly.

The start procedure is **VERY** important. Follow the described procedure, because otherwise the Speedseed can get damaged.

1. Fill seeds into the hopper.
2. Adjust the gearbox to the type of seeds that should be sown.



!! Make sure that the Speedseed and the tractor cannot move while you are setting them !!

3. Drive to a spot where the machine will be used.
4. Drive slowly forward and lower the Speedseed slowly until the machine drives completely on the ground.
5. Increase the speed to the required speed.



!! The maximum working speed is 12 km/h. Higher speeds are not recommended and can cause damage to the Speedseed !!

9.3. Stop sowing

1. Reduce the speed.
2. Lift the machine off the ground.
3. Drive to the next spot for sowing and start to sow.

10. MAINTENANCE

Time schedule	Check / Grease point	Method
Before every use	Check for loose bolts / nuts.	Tighten loose bolts / nuts with the correct tightening moment.
	Presence and readability of the safety stickers	Replace these if not present or damaged.
After every use	Clean the machine.	Only use air to clean the machine. Do NOT use water.
After the first 20 working hours (new or repaired)	Check for loose bolts / nuts.	Tighten loose bolts / nuts with the correct tightening moment.
	Provide the lubrication points with grease.	Use EP2 grease 1 shot
	Check whether the drive chains are greased adequately.	Grease the drive chains.
After every 100 hours	Check whether there is sufficient grease in the gearbox.	Fill the gearbox with 2.8 litres of EP0 grease.
	Check whether the drive chains are greased adequately.	Grease the drive chains.
	Check whether the hopper is clean.	Clean the hopper.
	Provide the lubrication points with grease.	Use EP2 grease

Table 7

10.1. Lubrication points

To guarantee the proper functioning of the Speedseed, the lubrication points at both sides of the machine (see Figure 6) must be greased periodically. Grease these points according to Table 7.

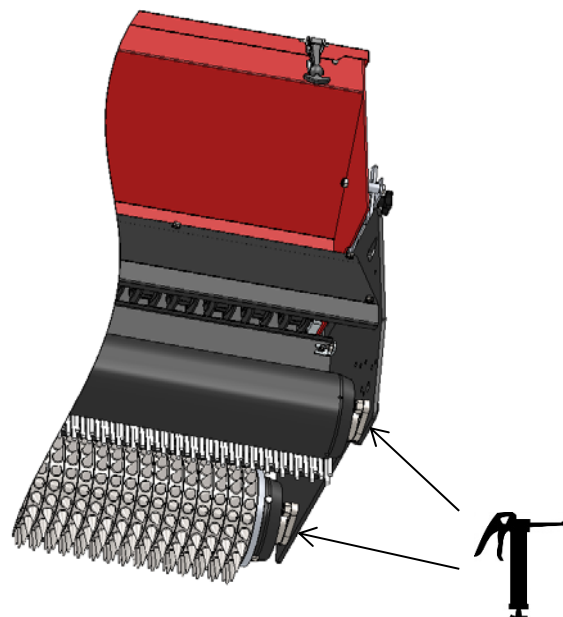


Figure 6

11. TROUBLE SHOOTING (PROBLEM ANALYSIS)

Problem	Possible cause	Solution
The seeds do not reach the correct depth.	The soil is too hard.	Aerate / irrigate
	Too little pressure on the front roller	Adjust the machine so that only the front roller touches the ground.
	Not enough weight on the machine	Stack more weight on the machine.
	Spikes are worn out	Replace the spikes
The tractor does not have sufficient traction.	Soil is too wet	Postpone sowing
	Not enough weight on the machine	Stack more weight on the machine
No seeds come out of the machine.	The seeds stick to each other because they are too wet	Use dry seeds
	Gearbox is in the wrong position	Adjust the gearbox
	The handle for operating the seed-element valves is closed	Operate the handle to open the flap
	No seeds in the hopper	Check whether there are enough seeds in the hopper. Top up if necessary.
Too many seeds come out of the machine.	The handle for operating the seed-element valves is opened too far	Readjust the handle for operating the seed-element valves

12. OPTIONAL: SET OF WEIGHTS

Standard, the Speedseed is equipped with a front bar to which the weights (1) can be attached (see **Figure 7**).

Please refer to the parts manual for the correct quantity of weights.

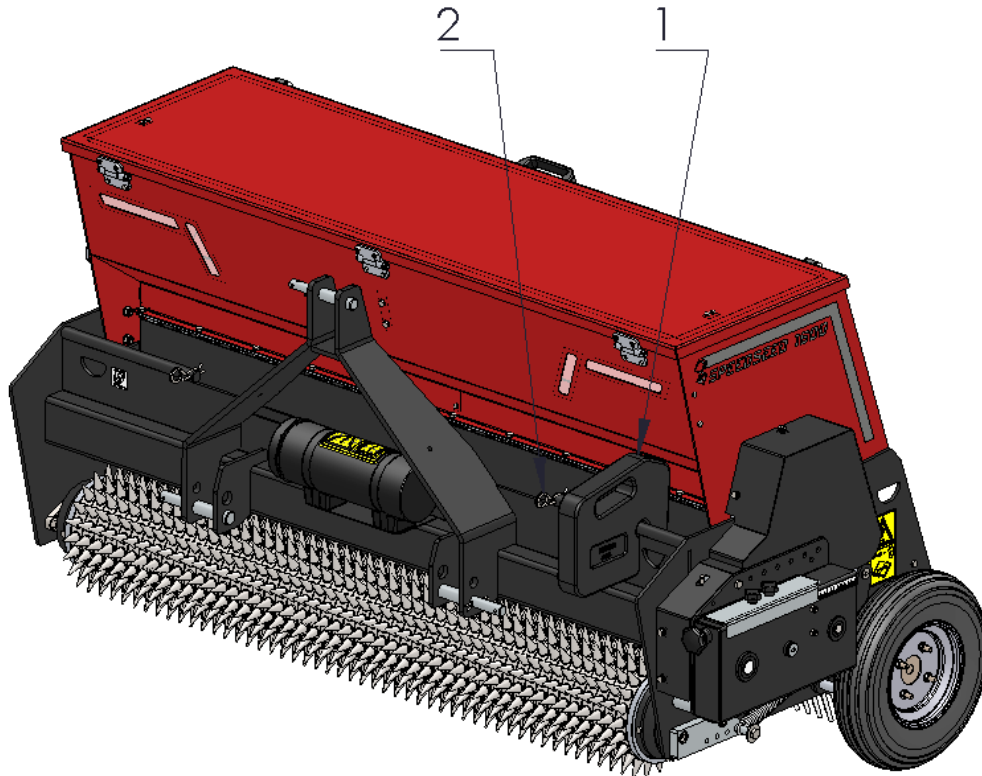


Figure 7

Do the following to mount the weights:

1. Remove the locking pin (2).
2. Slide the required number of weights (1) onto the axle.
3. Return the locking pin (2) into the frame.

The following weights per machine are available:

- Speedseed 1100: 6x 492.502.800 (120 kg / 264 lbs)
- Speedseed 1500: 12x 492.502.800 (240 kg / 529 lbs)
- Speedseed 2000: 20x 492.502.800 (400 kg / 882 lbs)
- Speedseed 2300: 26x 492.502.800 (520 kg / 1146 lbs)

13. OPTIONAL: SPIKES ON THE REAR ROLLER

You have the possibility to mount spikes on the rear roller (see **Figure 8**).

The article numbers for these spikes are:

- Speedseed 1100: 224.120.000
- Speedseed 1500: 224.160.002
- Speedseed 2000: 224.210.000
- Speedseed 2300: 224.240.000

Please refer to the parts manual for the correct assembly.



!! When mounting the spikes, make sure that you use approved hoisting equipment, never crawl under the machine and take into account that the spikes have sharp points !!

1. Ensure that the machine stands firmly on the ground and cannot move.
2. Lift the rear side of the machine off the ground so that the rear roller can roll freely.
3. Dismount the protective plate at the rear side (1).
4. Dismount the rear roller.
5. Dismount the scraper. Save the scraper for cases in which you want to work with a smooth rear roller.
6. Dismount the brush (2).
7. Mount the spike elements.
8. Mount the roller with the spikes (3) in the most forward position (4).
9. Mount the brush (2) in the rear position (5).
10. Mount the protective plate at the rear side (1).
11. Slowly lower the machine onto the ground.

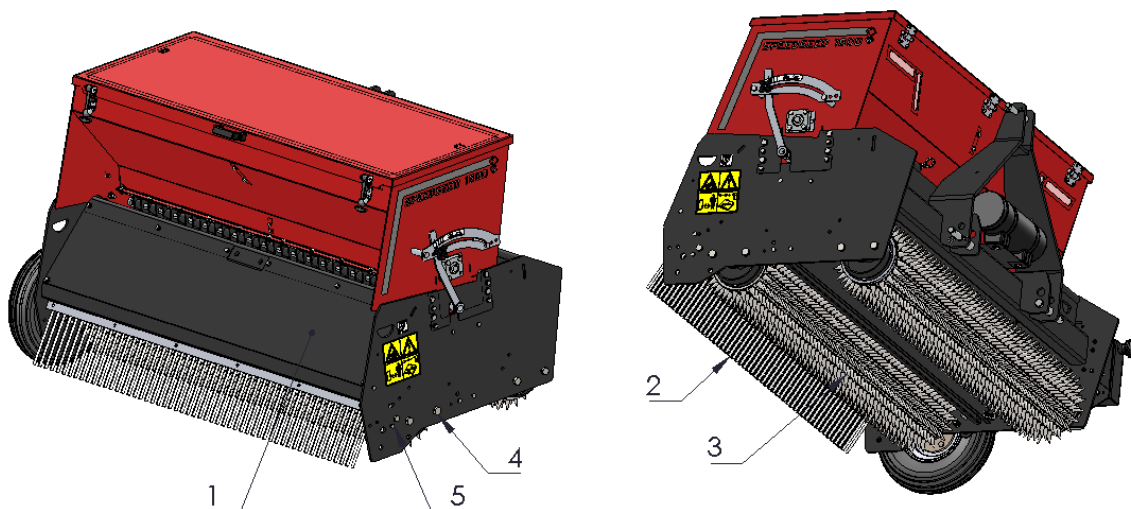


Figure 8

14. OPTIONAL: BRUSH SCRAPER

You have the possibility to mount an additional brush scraper onto the Speedseed (see **Figure 9**).

The article numbers for these brush scrapers are:

- Speedseed 1100: 490.809.013
- Speedseed 1500: 490.809.017
- Speedseed 2000: 490.809.022
- Speedseed 2300: 490.809.024

Please refer to the parts manual for the correct assembly.

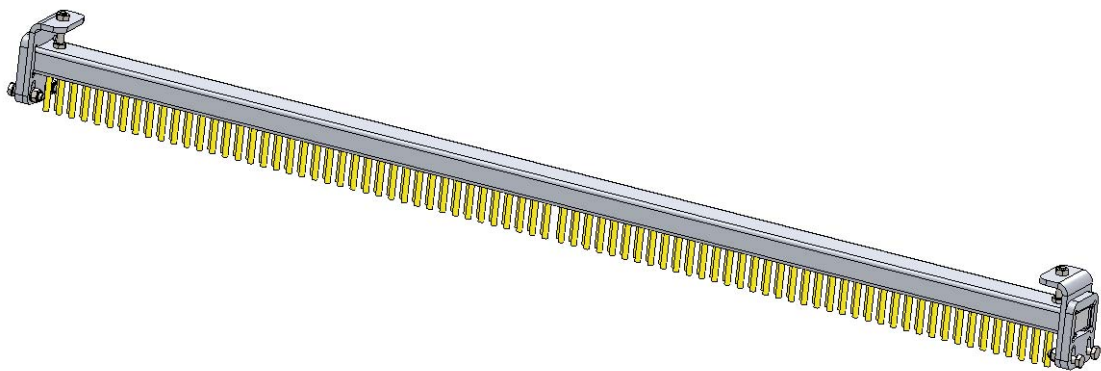


Figure 9

15. OPTIONAL: CRUMB ROLLER

You have the possibility to mount a crumb roller onto the Speedseed instead of the rear roller (see **Figure 10**).

The article numbers for these crumb rollers are:

- Speedseed 1100: 224.120.006
- Speedseed 1500: 224.160.006
- Speedseed 2000: 224.210.004
- Speedseed 2300: 224.240.002

Please refer to the parts manual for the correct assembly.

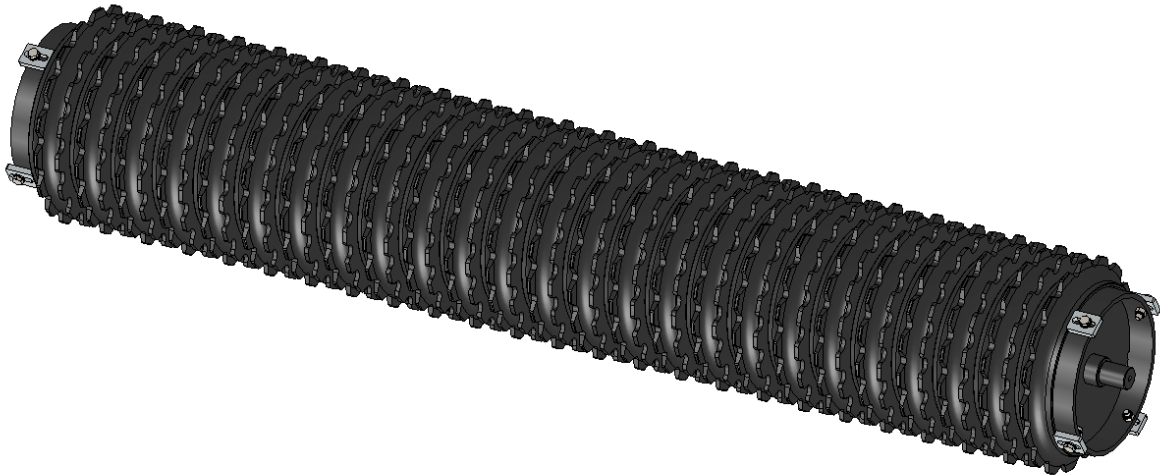


Figure 10

16. OPTIONAL: DIGITAL SURFACE METER

The machine can be equipped with a digital surface meter (see **Figure 11**) that can read a variety of data, such as the treated area, distances, operating hours, etc.

A separate manual (included in the delivery of the set) is available. This manual explains the operation of the surface meter.

If the settings of the surface meter have disappeared from the memory, then you should fill in the following specific parameters:

Machine	Parameter 'C' Pulses of the speed sensor (Chapter 8.2)	Parameter 'L' Working width (Chapter 8.4)	
	Setting UN=0 (metric); 1 (imperial)	m	ft
Speedseed 1100	79	1.2	3.93
Speedseed 1500	79	1.6	5.25
Speedseed 2000	79	2.1	6.89
Speedseed 2300	79	2.4	7.87

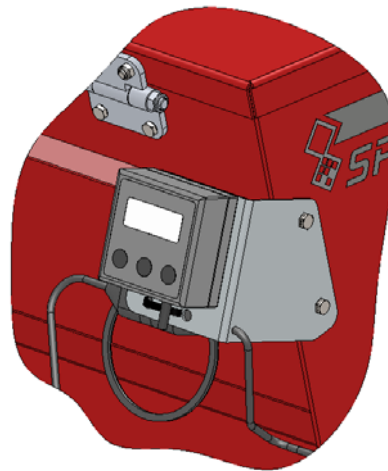


Figure 11

17. OPTIONAL: SET OF WHEELS

The machine can be constructed including a set of wheels (see **Figure 12**).

The article number of a complete transport kit is:

- Speedseed 1500: 224.160.000

This kit is delivered separately and can be mounted onto the machine with a standard 3-point connector. In general, the wheel kit will reduce the minimally required number of horsepower to 10. The kit is easily removed, so that the machine can be used in both manners.

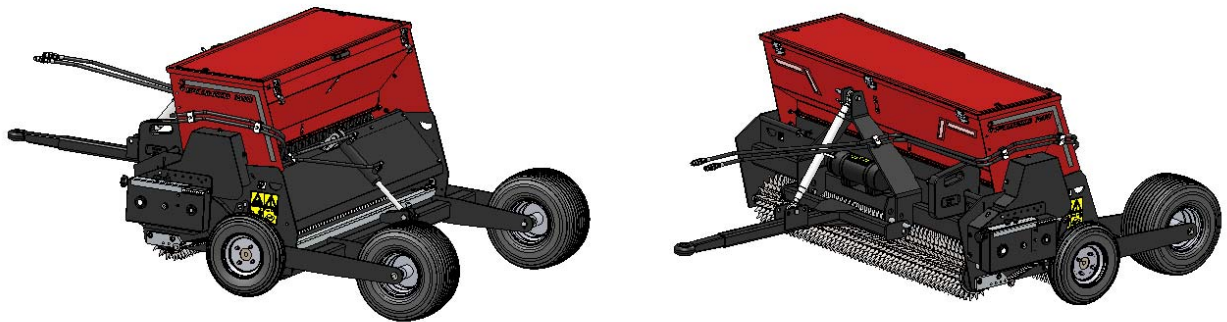


Figure 12



UC 300

UNIVERSAL COUNTER



NR.1111-EN

USER'S MANUAL





This product complies with EMC requirements as defined by Directives 2004/108/CE and successive modifications in accordance with standard EN ISO 14982 applied

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Manual code : 1111-EN
Issued : November 2011
Edition : April 2014

MC elettronica S.r.l. is not obliged to give notice of any further modifications of the product. The information given in this manual does not allow unauthorized personnel to tamper the product in any way. The guarantee on the equipment will no longer be valid if tampering should be detected.

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1. Rules and general warning

1.1 Introduction

This manual gives all the specific information that you need for a proper use of the equipment.

After buying the instrument, read the manual carefully and refer to it any time you have doubts on how to use the equipment or when you have to carry out maintenance operations.

Keep the manual on the machine. If this is not possible, keep it ready to hand.

ALL RIGHTS RESERVED. THIS MANUAL IS INTENDED FOR CUSTOMERS ONLY. ANY OTHER USE IS FORBIDDEN.

1.2 Terms of guarantee

SUBJECT OF THE GUARANTEE: the guarantee is applied to the product and to those parts which are marked with the serial number or any other identification number used by *MC elettronica*;

HOW LONG THE GUARANTEE IS EFFECTIVE: *MC elettronica S.r.l.* guarantees the UC 300 for a period of **1 year** from the manufacturing date (printed on the identification label which is to be found on the rear side of the equipment) and also accessories.

The guarantee covers the product and any repair carried out within the agreed terms.

This guarantee does not apply in the event of:

accidental damage;

improper use;

modifications which haven't been agreed upon, improper installation (or setting);

damage caused when a non-*MC elettronica* equipment, which is mechanically or electrically connected to our instruments, breaks or does not function properly;

act of God (lightning, floods, fire or other causes which do not depend from *MC elettronica*).

Repairs under guarantee, which must be carried out in the laboratories of our authorized centres, are entirely free of charge provided the equipment is directly transported to said laboratories or sent free port. Transport charges and risks are entirely borne by the Customer.

The above-mentioned guarantee is valid unless otherwise stated between *MC elettronica* and the Customer.



Warning

Mc elettronica declines any liability for damages or direct or indirect charges, as a consequence of improper use or inability of the Customer to use the equipment separately and/or together with other instruments.

1.3 Service

Service is available in all the countries where the equipment is officially supplied by *MC elettronica* (during and after the guarantee period).

Any kind of operation that is to be carried out on the UC 300 must be done in accordance with the instructions stated in this manual or as agreed with *MC elettronica*. If not, the relative terms of guarantee might become void.

2. General description

The UC 300 Universal Counter is powered by a rechargeable battery and stores all the main functions of a hectare counter in a small container which can be installed easily on any public works vehicle. You can choose between metric and imperial units of measurement to calculate area, distance and speed. The UC 300 Universal Counter can also count the working hours when the machine is running. Displayed on the screen are:

- 1) independent total counter for surface area (in hectares or acres, in units of 10 m² or 0.001 acres)
- 2) independent partial counter for surface area (in hectares or acres, in units of 10 m² or 0.001 acres)
- 3) speed of travel (in km/h or mph, in units of 0.1 km/h or 0.1 mph)
- 4) counter of distance covered (in metres or feet, in units of 1 metre or 1 foot)
- 5) working hour counter (in units of 0.1 hours)

Provided with the UC 300 are a battery charging cable, a magnetic sensor and a magnet of reference: the code for the complete kit is 00KIT-0014;

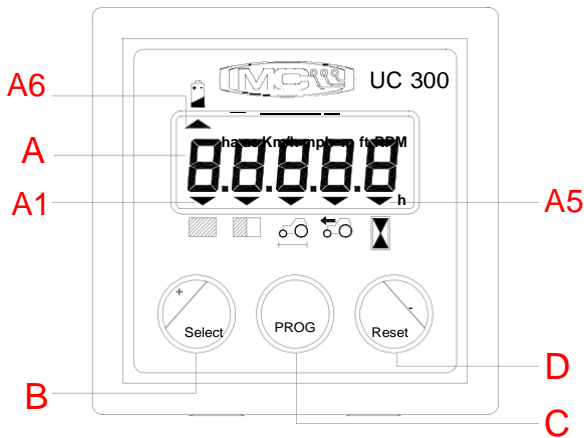
When the battery is running low, this is signalled on the display (refer to the section "Operation"). The user can connect the charging cable to the battery of the tractor and continue working during the charging process, or disconnect the sensor and charge the monitor separately.

Inside the connector of the magnetic sensor is a jumper for powering the UC 300: disconnecting the sensor turns off the monitor, saving on battery power. PLEASE NOTE: it is advisable to disconnect the sensor only when the machine is at standstill to avoid the partial loss of data of the totalizes; the programmable parameters, however, remain saved.

Essential requirements for the Universal counter:

- a) Powered by 3.6V internal rechargeable batteries
- b) Nominal battery charge voltage: 12V (16V max)
- c) Maximum dimensions: 78 mm in width, 78 mm in height and 38 mm in depth.
- d) 5-digit display + indicators, not backlit
- e) External application (IP66).

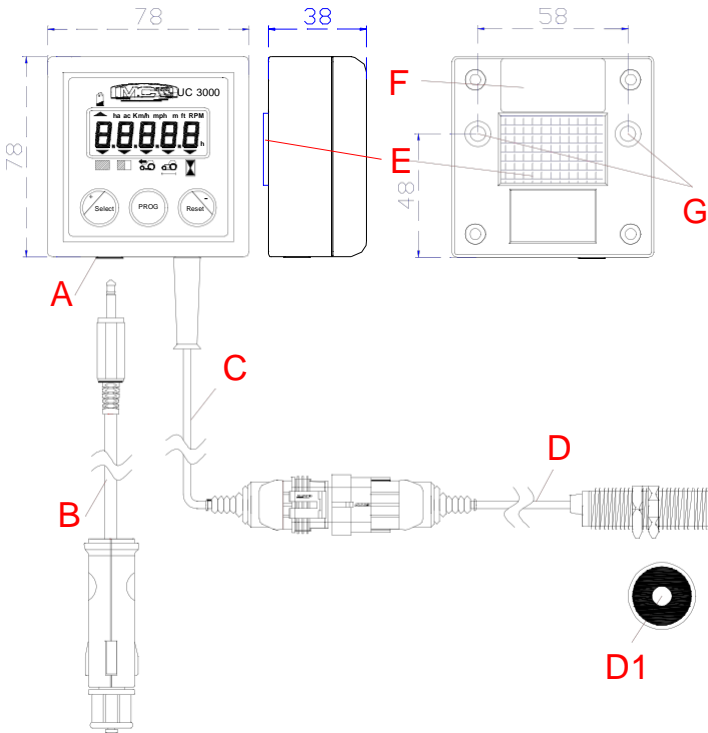
3. Description of the panel and electrical connections



Rif.	Description	signal Type INput/OUTput	Pin connector S.SEAL 4-way
A	LCD Display:		
	A1-A5: arrows indicating the size selected A6: arrow indicating low battery	-	-
B	Selection key size and "-" in programming	-	-
C	Programming key: allows you to enter the phase of programming parameters	-	-
D	Selection key size and "-" in programming	-	-
	Input magnetic sensor (*)	IN NPN NO	4
	Mass for the magnetic sensor	OUT GND	1
	Pin for bridge power monitor	-	2 e 3

(*) = Maximum input frequency 35Hz magnetic sensor

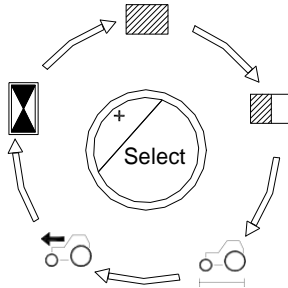
4. Overall dimensions



A	3.5 jack connector panel for battery charging
B	Cable 50 cm with cigarette lighter plug for charging battery (supplied) cod. CAV-0017
C	cable 20 cm with conn. s.seal 4-way for connection the magnetic sensor
D	sens. magnetic supplied cable and magnet diam.20mm (D1)
E	3M DUAL LOCK for removable mechanical attachment
F	label with identification parameters
G	M5 threaded inserts for mechanical fixing to panel

5. Operation

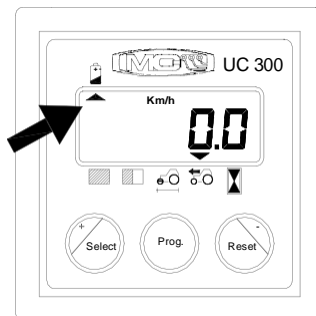
When the counter is started up for the first time (or after the battery is charged after having run down completely), the total area counter is shown on the display. The UC 300 is set by default to show metric measurements: the area is given in hectares, the speed in km/h and the distance covered in metres. The initial sequence is, therefore: Pressing the “select” button during operation shows the next measurement on the display, as follows



After selecting a measurement it is possible to reset it by pressing and holding the "reset" button for 3 seconds (with the exception of the speed of travel, which is instantaneous data).

6. Low battery warning

When the battery is nearly run down, the arrow under the battery symbol in the top left-hand corner lights up;



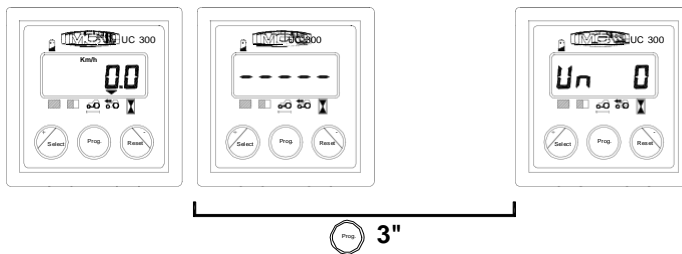
the residual autonomy of the UC 300 before it turns off completely is limited and will depend also on use. If the battery runs down completely and the UC 300 turns off, some of the data may be lost (refer to the previous section); to charge the battery, connect the cable with the jack connector (provided) to a 12V battery: **Do NOT use car battery charging devices.** The charging process generally takes about 10 hours, while the autonomy between a charging cycle and the next is about 2.5 years (although this depends on the extent and conditions of use); it is not necessary for the speed sensor to be connected while the battery is charging.

7. Standby mode

To save on energy and increase the autonomy of the batteries, the UC 300 automatically goes into standby after 5 minutes if it does not receive any pulses from the speed sensor and none of the buttons are pressed. In standby mode, power consumption is less than 30 μ A and the last data remains on the display without any other information. The UC 300 exits standby mode when the next pulse is received from the speed sensor or when you press any button for at least 1 second.

8. Programming

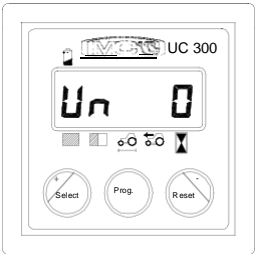
As with the totalizers, either metric or imperial units of measurement can be used for the programmable speed and area parameters. To access the programming phase with the UC 300 turned on, press the "Prog" button for 3 seconds and five horizontal dashes appear on the display. The first programmable parameter, "Un", then appears as shown below;



During the programming phase, you can use the "+" and "-" buttons to edit the value of the parameter, then press the "Prog" button to confirm your changes and move on to the next parameter;

8.1 Programming the “Un” (unit of measurement) parameter


Programming of this parameter is very important to the work in hand and to the programmable parameters. You need to select either the metric or imperial unit of measurement; you then only need to program the parameters of the UC 300 for the chosen unit of measurement.


	Name of parameter:	Un
	Description:	selection of unit of measurement
	Programmable range:	0 (=metric units) or 1 (=imperial units)
	Default value:	0

8.2 Manual programming of parameter “C” (pulses of the speed sensor)

This parameter represents the number of pulses emitted by the speed sensor after each 100 linear metres (or 328 feet) covered by the public works machine;

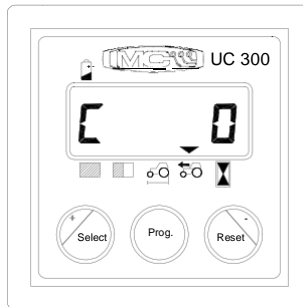
Enter the programming phase as described above and edit the value with the “+” and “-” buttons; pressing and holding either button will speed up the editing process. After setting the required value, press “Prog” to confirm and move on to the next parameter.

<p>with “Un” = 0</p> 	Name of parameter:	C
	Description:	Pulses of the speed sensor after every 100m covered by the machine
	Programmable range:	20 to 999 Steps of 1 pulse
	Default value:	200

<p>with "Un" = 1</p> 	Name of parameter:	C
	Description:	Pulses of the speed sensor after every 330 feet covered by the machine
	Programmable range:	20 to 999 Steps of 1 pulse
	Default value:	200

8.3 Automatic programming of parameter "C" (pulses of the speed sensor)

It is possible to program parameter C automatically: after entering the programming phase as instructed above, and with "C" shown on the display followed by the value currently programmed, press both the "+" and "-" buttons at the same time and the following appears on the display





At this point, travel 100 metres (or 330 feet) in the machine and the number will increase automatically on the display. After covering this distance, press the "Prog" button to confirm the data. It is advisable to repeat this operation at least twice.

If you try to acquire a value of less than 20 pulses, "Err" appears on the display and the UC 300 retains the last valid value to have been saved.

8.4 Programming parameter “L” (working width)

This parameter is the working width of the machine in metres (or feet).

Enter the programming phase as described above and edit the value with the “+” and “-” buttons; pressing and holding either button will speed up the editing process. After setting the required value, press “Prog” to confirm and exit the programming phase.

<p>with “Un” = 0</p> 	Name of parameter:	L
	Description:	Working width in metres
	Programmable range:	00.10 to 30.00 Steps of 0.01m
	Default value:	1.50
<p>with “Un” = 1</p> 	Name of parameter:	L
	Description:	Working width in feet
	Programmable range:	00.32 to 98.40 Steps of 0.01 feet
	Default value:	4.92

9. Maintenance

This chapter gives instructions on how to carry out ordinary and extraordinary maintenance.

Ordinary maintenance refers to those operations which must be carried out periodically. As they do not require specific skills, they can be carried out by the users (operators etc.).

Extraordinary maintenance refers to unforeseeable operations due to mechanic or electric failures. They require specific technical skills, so they should be exclusively carried out by qualified personnel (maintenance personnel etc.)

9.1 Ordinary maintenance

Ordinary maintenance consists in cleaning the instrument. Clean the instrument with a wet cloth and mild detergent to avoid erasing the serigraphs on the panel.



Warning

Do not use pressure water jets.

Do not use abrasive products, solvents or alcohol.

Do not press on the keyboard with pointed or hard objects in order to avoid damaging the polyester film, thus endangering the impermeability of the keyboard.

9.1.1 How to protect the main connector

In case of an extended use of the Monitor it is advisable to disconnect the main signal connector from the harness. It is advisable to insulate both the connectors (of the Monitor and of the Harness) by using a Nylon protection.

If the connectors of the monitor and of the harness are NOT disconnected no protection is needed.

9.2 Extraordinary maintenance



Warning

Extraordinary maintenance must be carried out by authorized personnel only.

10. Technical data

Power supply voltage	3.6 Vdc (internal batteries)
Max. energy consumption in stand by	< 50 μ A
Protection degree	IP 65
Range of operating temperature	-20 / +70 °C
Range of storage temperature	-25 / +85 °C
Mechanic vibrations resistance	2 g random

