



Combiseeder

Manual_Combiseeder_EN_2302

CS120-160-200-240

EC DECLARATION OF CONFORMITY CONCERNING MACHINES
According to Directive 2006/42/EG, annex 2, point 1, A

GKB Machines B.V.
Middelweg 1
2992 SP Barendrecht
Nederland

hereby declares that the

GKB Combiseeder

Type: CS120 - CS160 - CS200 - CS240

to which this declaration relates are in conformity with the provisions of:

- Directive 2006/42/EC Machinery Directive

At Barendrecht, 07/02/2023



T.J.W. Kraaijeveld

UKCA DECLARATION OF CONFORMITY CONCERNING MACHINES
According to Machinery (Safety) Regulations 2008

Manufacturer:
GKB Machines B.V.
Middelweg 1
2992 SP Barendrecht
Nederland

UKCA Delegate
GKB Machines Ltd.
Warwick House, Ermine Buseniss Park, Spitfire Close
Huntingdon PE29 6XY
United Kingdom

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GKB Combiseeder

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At Barendrecht, 07/02/2023



T.J.W. Kraaijeveld

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1. FOREWORD

The information contained within these operating instructions covers the necessary use, safety, operation, and maintenance of the machines mentioned in the CE declaration. Before operating anyone of the machinery has to read this operating manual in its entirety. The manufacturer will not be held liable for an injury or damage which occurs from improper use.

It is the goal of the manufacturer to create excellent products, therefore we hold the right to make changes at any time and will not be held under obligation to previously delivered machines. Certain aspects, such as weight and dimensions, may change at any time without notice. Images are also not bound to interim changes.

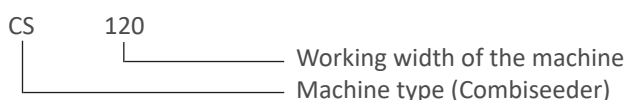
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2. INTRODUCTION

The Combiseeder is designed to sow or overseed natural or hybrid grass sports fields or golf courses. Spiked rolls are used for sowing. The rolls open up the soil, after which the grass seeds are brushed into the holes using brush bars. The end result can be optimized by adjusting a light top dressing using the GKB Sandspreeder. Every machine is marked with a code, as seen in the image below.

Example:

Model 'CS120':



The manufacturer shall not be held liable for any damage resulting from unintentional use.

3. CONTACT

Manufacturer:

GKB Machines B.V.
Middelweg 1
2992 SP Barendrecht
NETHERLANDS
info@gkbmachines.com
www.gkbmachines.com

Your personal Dealer:

Your GKB dealer:

Productnumber Manual: See footer/ front page

4. WARRANTY

The statutory warranty period of two years from the invoice date applies to the machines. Warranty repairs or product replacements do not extend the warranty period of the machine or parts. The guarantee does not apply to items arising from normal wear and tear or ageing.

A warranty procedure starts with an investigation to determine whether the problem is covered by the warranty. Your cooperation is required to verify that the warranty conditions have been met. To this end, keep a record of the maintenance and repairs carried out in a maintenance logbook.

If the manufacturer receives a warranty notification, it will be determined whether the defect is covered by the warranty. If this is the case, a suitable solution will be found in consultation with the customer. In all cases, consult with the dealer before you try to solve the problem yourself. Warranty can only be given if the machine is in its original condition.

The manufacturer's written permission is required to ensure that the machine does not deviate in any way from the aforementioned purpose of use. Use other than as described will lead to the loss of product liability and warranty.

Product liability obliges the manufacturer and the dealer, when selling machines, to provide a manual and to instruct the user on the operating, safety and maintenance instructions.

The manufacturer is not responsible for any (unintended) damages to grass or sport fields.

Caution! The operating instructions must also be supplied if the machine is subsequently exchanged or resold by the user. Also inform the new user of the regulations.

5. SAFETY

5.1. General

The safest operation requires these machines are operated exactly according to these instructions. In addition, there are also safety warnings on the machines to warn of potential dangers and instructions on how to handle them. The only way to 100% guarantee no property damage or personal injury occurs is to follow these instructions. While using this machine, keep this handbook nearby and always ensure that safety markings on the machines are visible.

Any local safety regulations, including road traffic regulations, must be observed at all times.

The warranty, CE marking, and product liability automatically expire upon changes being made to the machine without consultation of the manufacturer.

The machine is equipped with several safety stickers, to instruct the user how to handle the machine with care. An example of a safety sticker is shown next.

Annex III describes every type of safety sticker. Read them carefully before using the machine.



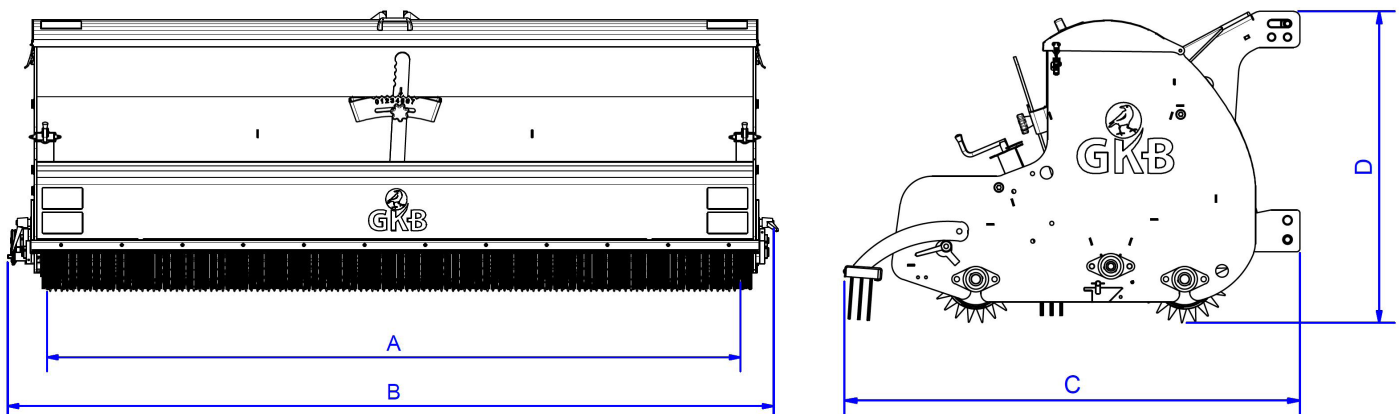
5.2. Safety instructions

1. These operating instructions must be read and understood by everyone who works, checks or maintains the machine in order to avoid risks and to avert dangers.
2. Pass on all safety and operating instructions to all users.
3. The machine may only be used for the intended work.
4. For optimum performance, the surface to be worked on must be flat and free of obstacles.
5. Only use parts and accessories specified by GKB. The installation and/or use of non-original parts and accessories may change or impair the specific characteristics of the machine. GKB is excluded from any liability for damage resulting from the use of non-original parts and accessories.
6. Before working with the machine, it is necessary to become familiar with all control components, their functions, safety aspects and risks. The machine may therefore only be operated and maintained by qualified personnel.
7. Maintenance must be carried out in accordance with the instructions in the manual. The maintenance carried out must be recorded. Never come under the machine in any situation!
8. Before commissioning, the safety of operation and transport must be checked. The inspection includes, but is not limited to, the correct functioning of the mechanical, hydraulic and electrical components.
9. If leaks are suspected, stop the entire hydraulic system and allow it to cool down before carrying out maintenance.
10. Before use, check that there are no persons and/or obstacles within the working area of the tractor and the machine.
11. There are several warning labels on the machine. These stickers contain important instructions for safe use and must always be clean and visible.
12. All safety devices must be attached to the machinery and be in good working order. Timely replacement of worn and damaged protective equipment is required. This also applies to the warning labels. Fixed guards must always be present during operation.
13. The operator's clothing must be close-fitting. If necessary, wear head and hearing protection.
14. Driving on the machine during work and transport is not permitted.
15. When using the machine on public roads, the (local) traffic regulations of the respective country apply. Observe the markings, lighting and safety devices applied. Only drive if all required permits and approvals have been obtained.
16. Maintain an adjusted speed when the machine is hanging behind the tractor. Especially when driving over thresholds or poor road conditions. Always place the topline in the round hole!
17. The driver is responsible for ensuring that the tractor and the machine are on public roads in accordance with the regulations. Permitted axle loads and weights must be considered.
18. If the driver is unable to oversee the carriageway immediately behind him, he must be instructed when reversing. Instructors must be within the driver's field of vision only and never between the tractor and the machine.
19. Connect the machine with the tractor according to prescribed tools.
20. When connecting and disconnecting, parking or storing the machine, it must be prevented that the machine moves unintentionally. Depending on the machine, this can be prevented by applying the brakes, using the parking position or locking the wheels by placing wedges.
21. During use, transport or storage on a sloping slope or during maintenance, one should be aware of the risk of tipping over.
22. Prevent burns by careful use of hot components such as oil lines and engines. When carrying out maintenance work, allow the system to cool down completely.
23. It is not allowed to drive or maintain the machine under the influence of medication, drugs or alcohol.
24. Using headphones or hearing protection with music or radio is not permitted.
25. Smoking and open fire is prohibited in and around the machine.

5.3. Product specifications Combiseeder

	Eenheid	CS120	CS160	CS200	CS240
Dimensions					
Working width A	cm	120	160	200	240
Total width B	cm	145	185	225	265
Length C	cm	145	145	145	145
Height D	cm	100	100	100	100
General specifications					
Empty weight	kg	510	690	800	990
Capacity tank 1	l	75	100	125	135
Capacity tank 2	l	75	100	125	135
Max. water pressure	bar	1	1	1	1
Max. noise*	dB(A)	30	30	30	30
Towing vehicle					
Power	hp	35-60	40-70	60-90	70-100

* When using personal protective equipment, bear in mind that in many cases the sound of the machine is drowned out by the towing/powering vehicle.

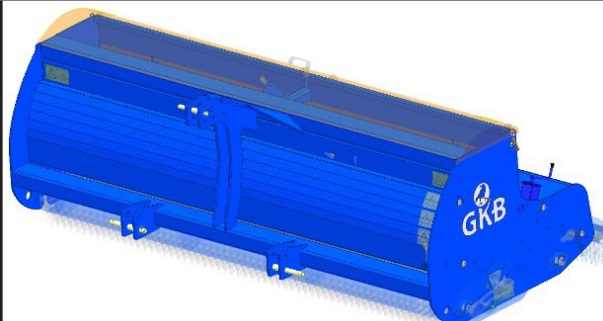


6. CONSTRUCTION OF THE COMBISEEDER

A Combiseeder has many different components and parts. This chapter will describe each of them.

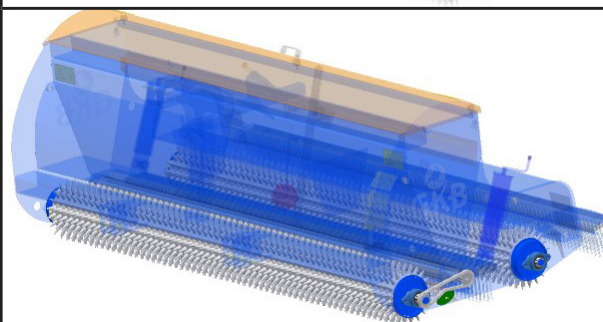
6.1. The frame

The frame of the Combiseeder forms the basis for the different components of the machine. The three-point hitch connects the machine with the towing vehicle. Hydraulic connections are not required.



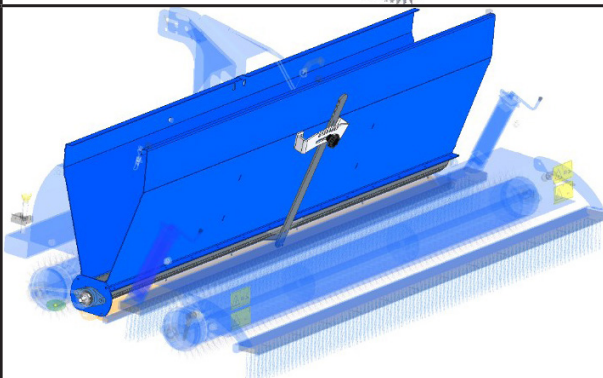
6.2. The spike rolls

Two spiked rolls are placed in the machine. These rolls produce 1500 holes per square meter. The roller is built up of loose discs which can turn individually. This offers the opportunity to make turns during the sowing process. The default spiked rolls are used for overseeding. To sow fields again Cambridge rolls are used.



6.3. The seeding unit

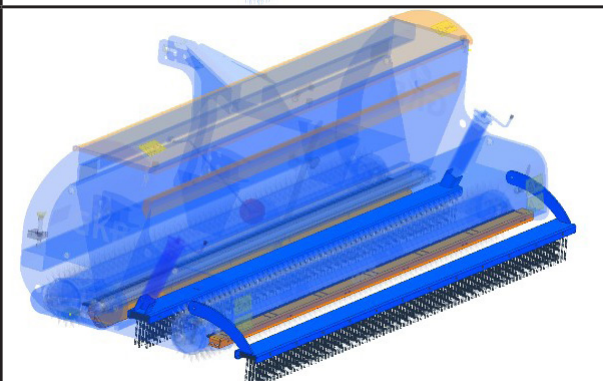
The preferred seed is stored in a bunker. A rotating brush divides the seeds over the spreader unit. It is possible to apply three to fifty grams of seed per square meter. The amount of seed to spread can be changed by using a handle on the rear side of the bunker. Using an additional reservoir cover, positioned in the bunker, it is possible to measure the dose of seed prior to working the field. This is further explained in paragraph 6.2.



6.4. The brushes

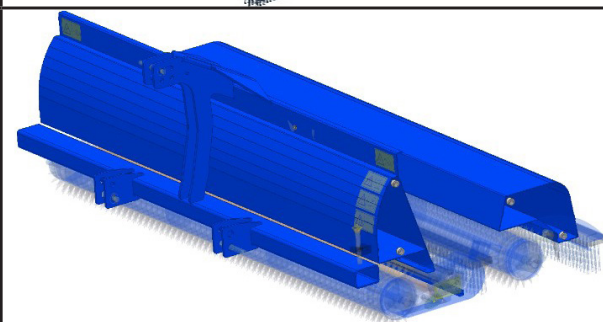
After applying the seed, two brush bars are used to brush the seed into the holes. This ensures that the seed is used as efficiently as possible.

The spiked rolls are constantly cleansed during operation using a fixed brush bar.



6.5. The water tanks

The machine is provided with two water tanks. Filling the tanks makes the machine heavier, so that the rolls sting deeper.



7. COMBISEEDER OPERATION

7.1. Connecting and disconnecting the Combiseeder

The following steps describe how to connect and disconnect the Combiseeder.

Connecting:

- | | |
|---|---|
| 1 | Make sure that the tractor and machine can't move and are placed horizontal; |
| 2 | <p>Connect the machine to the three-point hitch of the tractor and secure the attachment points with the locking pins;</p> <p>Adjust the toplinek in the middle of the slot when the machine is placed horizontally;</p> <p>Lift the machine and check if the distance between the machine and ground is equal on the left and right sight;</p> <p>If necessary, change the positions of the adjustable stabilizer arm;</p> |




 Zie riskanalysis: Drive-unit/ Machine environment

Disconnecting:

- | | |
|---|--|
| 1 | Make sure that the tractor and machine can't move and are placed horizontal; |
| 2 | <p>Lower the machine slowly until it completely rests on the field;</p> <p>Disconnect the tree-point hitch and move the tractor away from the machine.</p> |



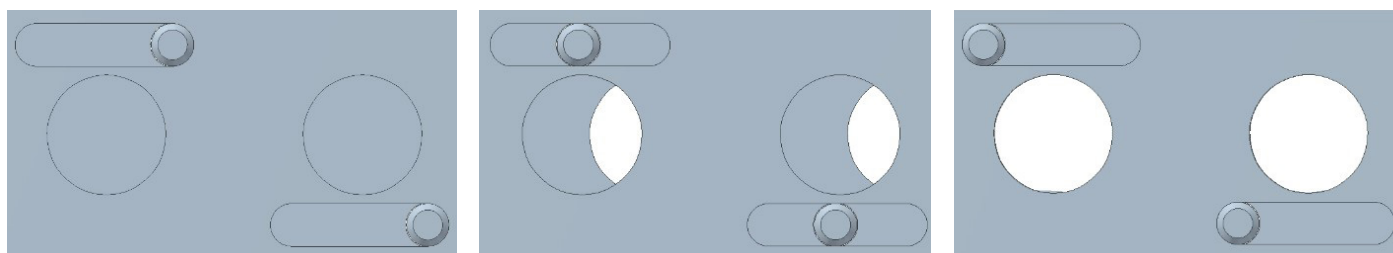
 Zie riskanalysis: Drive-unit/ Machine environment

7.2. Adjusting the spread rate

Using the seed dosing system it is possible to apply three to fifty grams of grass seed per square meter. The preferred quantity can be adjusted on the front side of the machine.

Steps:

1. Make sure the combination of towing vehicle and machine is set up horizontally and cannot move;
2. Adjust the handle on the front side of the machine. Position '0' is fully closed, position '7' is fully open, see figures below. Move the handle first to position 7 prior to setting the preferred position.



It is possible to physically measure the amount which is spread. A reservoir is mounted in the machine which can be placed underneath the spreader unit. Follow the steps below to determine the amount of grass seeds per square meter:

Steps:

1. Position the machine so that the spiked rolls run completely freely. Take all safety measures into consideration;
2. Place the reservoir underneath the spreader unit;
3. Place the provided key on the bolt of the front spiked roll; (circled in red)
4. Turn the spiked roller around on the front side. The required number of rotations is shown in the table below.
5. Remove the reservoir and weigh the amount of grass seed.



Required number of turns per square meter:

Surface area:	Unit	CS120	CS160	CS200	CS240
1 m ²	<i>Amount of turns</i>	3,5	2,5	2	1,7



Zie risicoanalyse: Zandstrooier/ omgeving machine

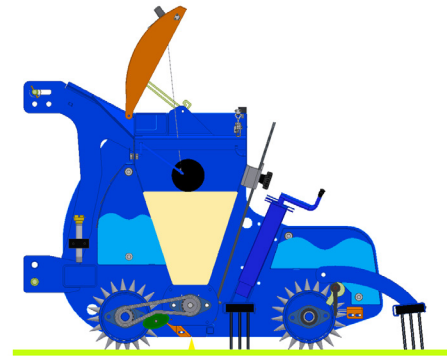
7.3. Positioning the height of the machine

The filling of the tanks makes the machine heavier, so that the rolls sting deeper. Two water tanks are shown in the figure. A pipe nipple with Geka coupling is provided to fill the tanks. Two nipples are applied on both tanks to both fill and drain the tanks. Open both nipples and fill the tank using the bottom nipple. Empty the tanks by reopening both tanks.

Make sure the spreader unit remains completely dry due to seed blockages.

Empty both tanks when it is freezing due to potential freezing.

The highest allowable water pressure is 1 bar.



The two brushes are adjustable at any height. The brush, directly behind the spreader unit, can be adjusted using two spindles. The brush on the rear side is adjusted using two bolts. Place the bristles just against the floor for an optimal result.



Zie risicoanalyse: Zandstrooier/ omgeving machine

7.4. Transport and storage

Transport:

When transporting the machine, a suitable means of transport must be selected. Make sure that the machine is secured against rolling away and tipping over. If you don't have sufficient knowledge for a transport, carry it out by a specialised transport company. Provide at least four attachment points on the transporting vehicle.

Storage:

The following points must be taken care when storing the machine:

1. Before storage, clean the machine in such a way that no sand or other impurities are left behind;
2. Store the machine at a dry place;
3. Check if the machine is positioned right with the support legs or place wheel chocks in front and behind the wheels;
4. Never put the machine away on the brake (if applicable);
5. Empty the tanks of the machine if they are filled with water;
6. To prevent corrosion of uncoated parts, apply a protective oil layer;

If the machine is to be used again after storage, all maintenance points must be gone through. Before use, make sure that all components are working properly.

Lifting:

There are fastening eyes provided at the machine for safe lifting. It's recommended to hoist the machine with lifting straps. Use at least two straps in all cases. The lifting points are indicated in the figure. Before lifting, make sure that the machine is free from loose materials like seeds or infill materials etc.



8. MAINTENANCE

8.1. Maintenance schedule

To maintain machine quality, adhere to the following diagram. The list of spare parts will show the correct parts to replace. See chapter 7.3 for safe execution of the maintenance points.

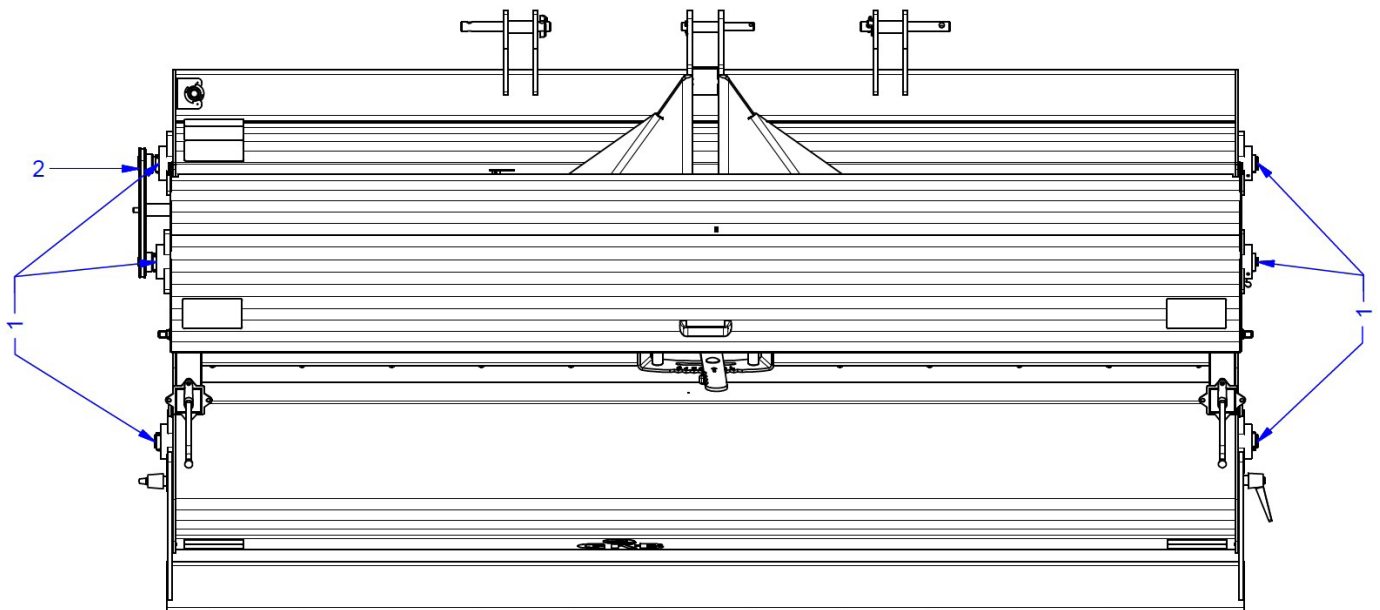
Always ensure that the machine is switched off, cannot move and has cooled down completely.

		Operating hours					
		Before use	50 h	250 h	500 h	1000 h	Annually
General	Outside cleaning of the machine	x					
	Check if all safety stickers are on the machine	x					
	Check operation of the dosing valve on the spreading unit	x					
Others	Check tension on the chain (tolerance of 1-2cm)			x			
	Check locking pins	x					
	Tighten bolted connections of rotating parts		x				
	Tighten bolted connections of fixed parts			x			

8.2. Lubrication scheme

For optimum machine performance, please refer to the plan below for lubrication of the maintenance points.

		Operating hours					
		Before use	50 h	250 h	500 h	1000 h	Annually
EP2 lubricating grease	1 Lubricate bearing of stirrers		x				
Chainspray	2 Lubricate the chain drive of the spikeroll and dosing brushes			x			x

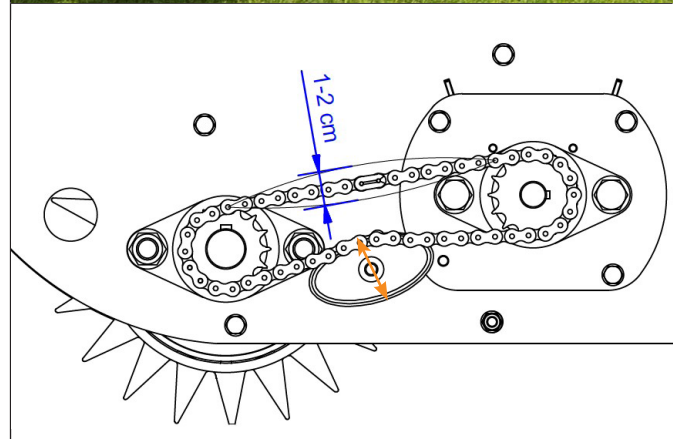


8.3. Performing maintenance

Always make sure that the machine is switched off, cannot move and has cooled down completely.

Tension chain transmission:

- Remove the shielding of the transmission;
- Loosen the bolt chain tensioner;
- Tension the chain with the tensioner until a tolerance of 1-2 cm is reached;
- Keep the tensioner under pressure and tighten the bolt;



Lubricate bearings:

- A grease nipple is placed on every bearing for lubricate possibilities



9. FAILURES

If a failure is detected, please go through the following points before contacting your dealer.

Result		
<i>Symptom</i>	<i>Cause</i>	<i>Solution</i>
The seeds don't come deep enough in the field	Machine is too light	Fill the water tanks with water to make it more heavier
	The brushes are placed too high or low	Adjust the brushes so that the hairs create a slightly sweeping motion. Replace if necessary
	Spikerollers are filled with pollution	Clean the spikerollers
The spreadrate is not correct	The dosing unit is set incorrectly	Change the dosing amount
	The seeding unit is slightly wet	Inspect whether the seeding unit is dry
	Brush rotor is defect	Inspect the rotorbrush. Check if all the hairs are still in the rotor. Make sure that they take the seeds out of the bunker. Check if the dosing unit is closed well by the rotorbrush
	The dosingunit is blocked	Clean the holes of the dosingunit with compressed air
	The adjustment hendle is defect	Inspect if the adjustment hendle works correctly

10. END OF LIFE

To dispose of a machine, follow all local regulations. Practice appropriate safety measures.

Follow these steps:

1. Decommission the machine and shut it down hydraulically;
2. Drain and recycle all consumables;
3. Dispose of the machine in accordance with the local regulations.

ANNEX I TIGHTENING TORQUE

When tightening bolts, observe the following maximum torques (ISO898/1).

The following types of bolts are used in the machine:

- Bolts for wear parts (chisels, etc.): 10.9
- Other bolts: 8.8

Tightening torque [Nm]				
		Bold strength:	8.8	10.9
Metric	M5	6	8,5	
	M6	10,3	14,7	
	M8	25,5	35,3	
	M10	50	70,6	
	M12	87,3	122,6	
	M14	138,3	194,2	
	M16	210,8	299,1	
	M20	411,9	578,6	
	M24	711	1000	


ANNEX II RISK ANALYSIS

Based on risk analysis, the machine has been designed with the safety of users and bystanders in mind. Below is a list of the measures that have been taken to ensure proper safety and prevent injury:

Item	Risk	When	Risk reduction
Drive unit	Crushing/ cutting injuries due to the transmission	If a bodypart or clothing comes in contact with the transmission of the drive unit	Fixed shieldings placed Safety stickers placed Safety instructions in manual
Spike rollers	Crushing injuries due to the rotating of the spike rollers	If a bodypart or clothing comes in contact with the spike rollers	Fixed shieldings placed which can only be removed with tools Safety stickers placed Safety instructions in manual
		If a toe or feet comes under the machine during use.	
Dosing brush	Crushing of limbs between the dosingbrush and bunker	If someone opens the bunker during operation of the machine	Safety stickers placed Safety instructions in manual
Bunker valve	Crushing injury between the bunker valve	If a person open or close the valve by hand	Safety stickers placed
Brushes	Crushing injury caused by construction	If someone get stuck in between the brushes and the frame	Safety stickers placed
Machine environment	Being run over by the machine and/ or tractor, resulting in serious injury	If the person is between the machine and the tractor and the combination is moving (unintentionally).	Safety stickers placed Safety instructions in manual
		During transport on public roads.	
	Tilt risk of instability resulting in bruising / pinching injury	If the person is next to or under the machine during maintenance. If the person is on a slope next to the machine.	Safety stickers placed Safety instructions in manual
	Hearing loss	Danger of hearing damage if someone is near the machine.	

ANNEX III SAFETY STICKERS

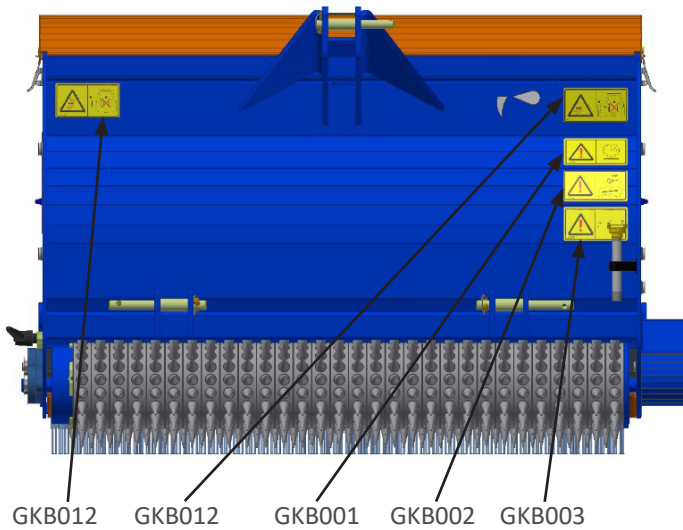
To promote safe practices and proper handling reminders, safety stickers are adhered to all machines. If a sticker cannot be read or found, it should be replaced immediately. The following page shows an overview of all the stickers and their positions.

GKB001	<i>Comply with all maintenance instructions</i>		GKB002	<i>Refer to the owner's manual. It contains useful information about the use, safety and maintenance</i>	
GKB003	<i>Regular lubrication</i>		GKB004	<i>Switch off the power take-off before lifting the implement</i>	
GKB005	<i>Risk of retraction due to rotating parts</i>		GKB006	<i>Risk of finger cutting due to rotating parts</i>	
GKB007	<i>Danger of rotating parts</i>		GKB008	<i>Risk of retraction due to rotating parts</i>	
GKB009	<i>Risk of crushing</i>		GKB010	<i>Keeps distance when the machine is in operation due to swinging parts</i>	
GKB011	<i>Keep a distance when the machine is in operation due to flying parts.</i>		GKB012	<i>Risk of crushing between tractor and implement</i>	
GKB013	<i>Danger of retraction when opening the cover when the rotor is switched on</i>		GKB014	<i>Choice in minimum to maximum adjustment</i>	
GKB015	<i>Danger of retraction due to rotating parts</i>		GKB	<i>Place a safety piece before entering the danger zone</i>	
HOT	<i>Keep a safe distance from hot surfaces</i>		018417	<i>Required speed</i>	

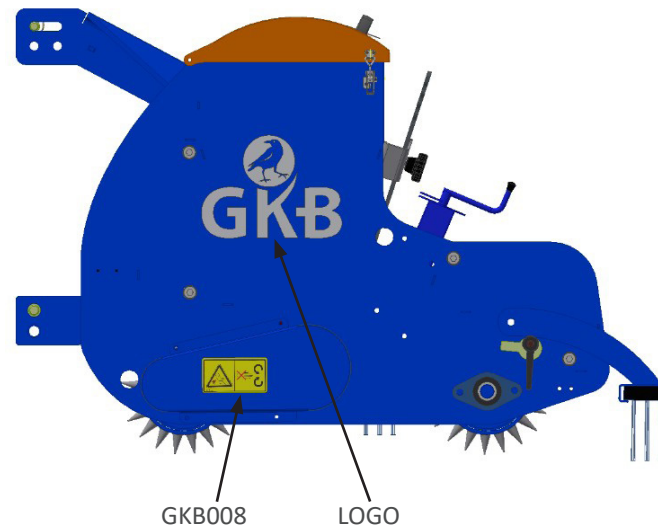
Location safetystickers

The illustrations below show all the safety stickers and their positions:

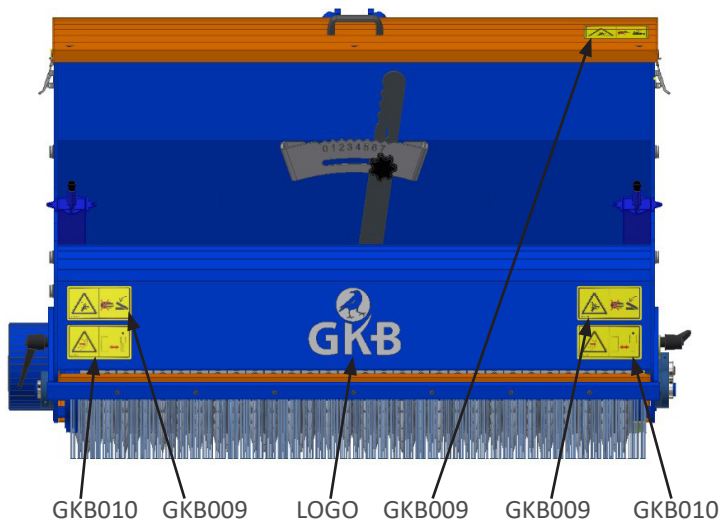
Front view:



Right view:



Rear view:



Left view:

